American Perfumer AND AROMATICS

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ESSENTIAL OILS

AUGUST 1956

THE MAGAZINE OF TASTE AND SCENT

Conifer Oils . . . Page 31 • Natural Strawberry Flavor . . . Page 53

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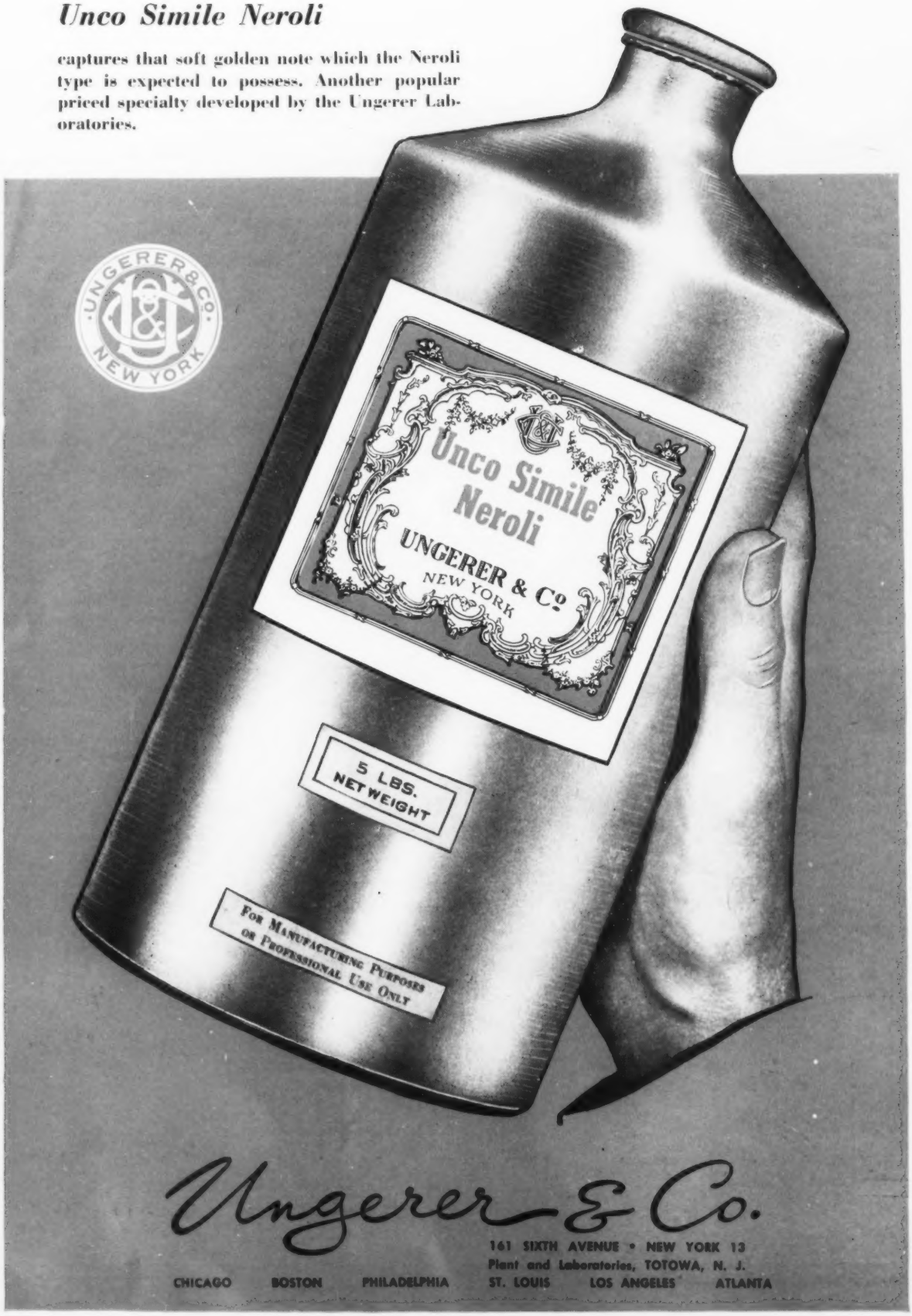

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AUGUST 1956

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NBP ABC ABP

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LAST MINUTE NEWS . . .

Eric Vles Misses Sea Disaster by Cancelling Stockholm Trip

Eric Vles, popular treasurer of Polak's Frutal Works, Middletown, N. Y. concedes that the high pressure of business sometimes manifests its advantages in fortunate ways. Mr. Vles had engaged passage on the Stockholm which sailed July 25 for Europe; but due to the pressure of work which he wanted to complete before sailing, he cancelled the trip a day before the vessel departed and engaged passage on an airplane for July 28, so as to leave the American company a few days later and arrive at the home office of the company in Holland a day earlier. Had he not done so he would have been on the ill-fated ship which rammed the incoming Andrea Doria, which was sunk in the collision off Nantucket, and would have had to return to New York.

World Outputs of Whale and Sperm Oils Go Up this Year

Despite a cut in the Antarctic catch quota from 15,500 blue whale units to 15,000 per season, the world production of whales and sperm oils in 1956 is estimated at 425,000 and 105,000 short tons respectively, the Foreign Agricultural Service reports. The season lasted 58 days. The two previous years registered 72 and 76 days. The International Assn. of Whaling Companies reported that British, Norwegian, Japanese and Dutch whaling companies had agreed to limit the whale catching vessels for the 1956-1957 season to a total of 210 not including those to be used by the Soviet Union.

Market Research Planned by Beauty & Barber Manufacturers

Edward J. Breck of the National Beauty & Barber Manufacturers' Assn. outlined proposals for marketing research at the July 17 meeting of the Marketing Research Committee, of which he is chairman. The committee meeting was to explore and crystalize specific proposals submitted by members for gathering statistical data on the movement of goods which by providing guideposts would enable manufacturers to do a better job in planning the production, promotion and distribution of merchandise. The development of the marketing research job is a titanic undertaking and will be considered at the association's convention August 18.

General Food Sales Reach $931 Million—New Products on Way

Sales of General Foods Corp. for the fiscal year of 1956 which ended March 31 were $931,000,000. It spent 75 million dollars for advertising. The company is investing more in the development of new products than ever before, despite the fact that products in the line for more than ten years accounted for two thirds of its sales. The company now has 37 plants in the United States and 3 in Canada. It operates producing plants in 11 countries and has distributors in 62 countries. While its foreign sales have doubled since 1949, they account for only 3% of the company's total volume.

Beauty for Girls Returning to School on Nationwide TV Shows

A "Back to School" theme to demonstrate the newest trends in beauty for girls returning to school and college, with the cooperation of the Toilet Goods Assn. and the National Hairdressers and Cosmetologists Assn., will be featured by the Columbia Broadcasting Co. on two television shows daily from August 27 to 31. Retail store tie-ins and manufacturers' commercials on school age toiletries will be included. About 14 million girls and young women are expected to return to school and college this Autumn.

Revlon's 6 Months Profits Over Those for Entire Year of 1955

Net profits of Revlon Products Corp. for the second three months of this year will approximate $1,900,000 according to Charles Revson, president. This would make the first six months profits $3,708,000—an amount greater than the total net profits for the entire year of 1955.

Advertising and Packaging are Like "Love" and "Marriage"

Advertising and packaging are like love and marriage—you cannot have one without the other according to Arthur L. Harris. Advertising first establishes product demand. Packaging provides stimulus at point of sale. Without proper packaging the uninspiring package fails to identify itself or is virtually indistinguishable from that of a competitor. The advent of self-service stores makes shopping faster and the package design must do much of the job the salesman used to do. Products should have "grab appeal." Some packages, however, well designed when in the studio may simply blend into the surrounding packages when on a shelf. One way to avoid package blending is to employ the multiple unit package, the two-pack, three-pack, etc. carton that has more display space and thus a better chance to develop grab appeal. More and more manufacturers are aware of the fact that today the package doesn't simply wrap and protect the product—it helps to sell it.

Fragrance for Hot, Tired Feet and to Relieve Insomnia

If your vacation activities include tennis, golf, sightseeing trips or any venture requiring you to be on your feet, the enterprising Fragrance Foundation suggests the use of fragrance for soothing relief. After scrubbing, the feet should be dipped into cold water into which toilet water or cologne has been poured. They should be dried giving special attention to the skin between the toes, then massaged with cologne starting at the toes and working up past the ankle. Dusting powder or talcum should then be used. The Foundation reports that this procedure will reduce surface skin temperature, swelling will be lessened, and the feet will feel cool again. Another suggestion advocates spraying a light airy cologne in the bedroom before retiring to relax an overly stimulated mind and give one a sense of well being.

Rules on Promotional Allowances to Retailers Given by F. T. C.

In the form of rules Frank Hier hearing examiner for the Federal Trade Commission redefines what may be done to comply with Sec. 2 (d) of the Robinson Patman Act. The rules are:

The seller is free to choose whether to give promotional allowances.

If he does, he is free to choose the base on which to make the payments (such as dollar value of purchases).

The base must be measurable and capable of being proportioned to payments.

The base must be within the reach of all competing customers. For example, a seller cannot limit advertising to media of such wide circulation and high expense that only his larger customers can afford to participate.

The base and the terms of payments must be definitely and understandably stated to all customers and affirmatively offered to them. The seller cannot determine in advance that a particular customer cannot or will not take advantage of the offer. He also cannot determine that the amount which would be available is too small to bother with.

He must require from all the same proof of services contracted and paid for.

Payments made must be in the same proportion to the base selected to all customers.

The seller may have more than one plan, but each must comply with these conditions.

In the event a seller enters into a cooperative promotional allowance plan devised and offered by a customer, he adopts this plan as his own. It must be affirmatively offered to all other customers under the conditions outlined.

When different plans are predicated on different products, the products must actually be different from a competitive standpoint, not merely distinguishable by reason of size, weight and packaging.

The rules were made in the Atlanta Trading Corp. case.

PERFUME BOTTLES *from France*

Incomparable beauty of design . . . unparalleled skill in craftsmanship . . . unsurpassed prestige . . . these are the gifts French artistry has given to the world for centuries. The 17th and 18th Century courts of France gave birth to the essence of French fashion . . . an indefinable quality that has since become synonymous with gallic design. Every fine perfume created in France reaches the consumer in a bottle designed to perfectly express the character of the scent. This perfectionist's approach is offered to you at a cost lower than imagined . . . designed to your own specifications . . . or our staff of French artists are at your command to create a shape exclusively your own without additional cost. Every bottle is precision fit with ground glass stoppers that hermetically seal the contents. Mold cost is low . . . and for economy packaging, we offer a large selection of standard shapes in various sizes. Write for complete details.

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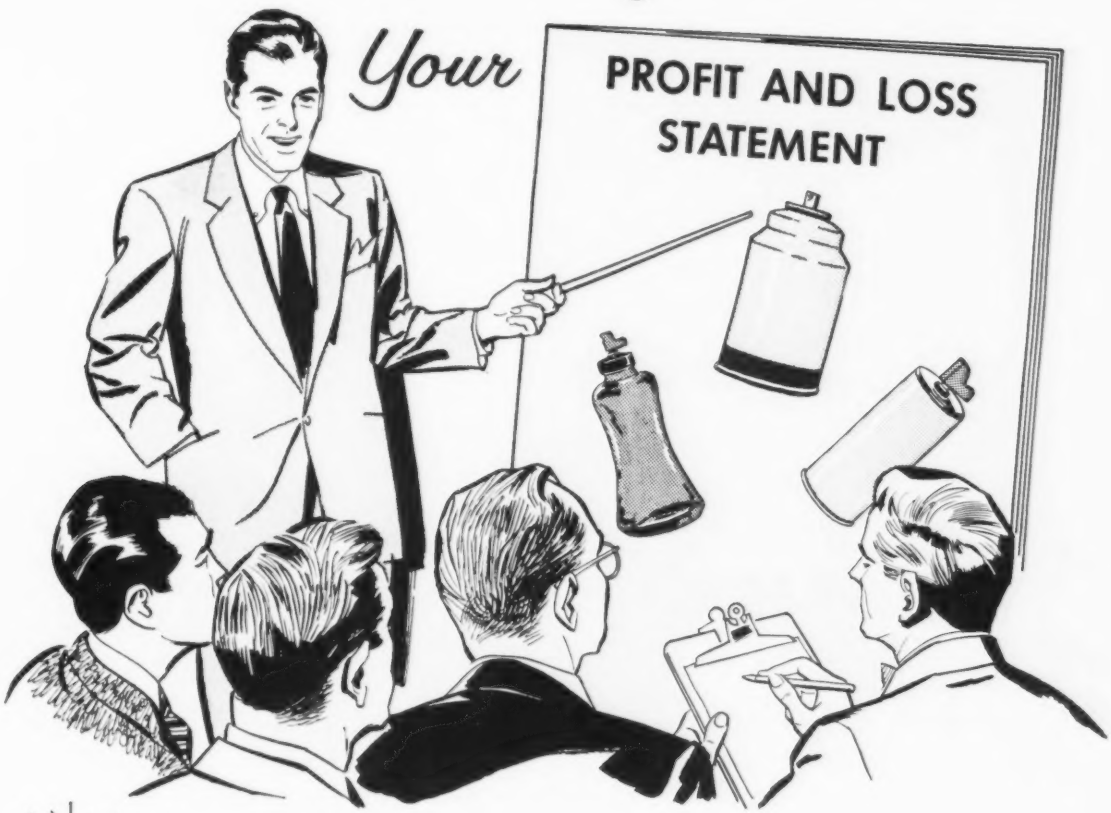

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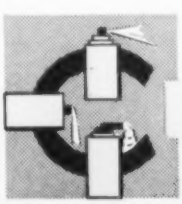

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Editorials . . .

Tax Savings Through Mergers . . .

In spite of the efforts of the Treasury Department to prevent the use of loss corporations for tax avoidance, companies with large operating loss carry overs continue to be sold at a premium.

There is no objection to the common situation where persons acquire the stock of a loss corporation and by pouring resources and skill into its operation succeed in making it a profitable venture until the loss carry over is exhausted. Nor is there any objection when a loss corporation without any major change in its ownership acquires profitable new lines of business which enable it to make use of its loss carry overs.

It is when a major change of stock ownership is accompanied by changes in the type of business carried on that a situation is presented that is particularly unhealthy. The complexities and the ambiguities of the discriminatory and vague federal tax code virtually encourage devious evasions which lawyers by various legally clever maneuvers make use of to enable their clients to avoid substantial tax payments.

"Why," asked Cameron Hawley in an address before the Pennsylvania Bar Assn. "do we have a situation where it is so often more profitable to sell a company than to go on operating it as a useful and productive entity? And why should companies find it so desirable to make corporate purchases and effect mergers that are so obviously a violation of common sense? Why should a mismanaged company be more valuable because of the loss it has piled up than as a sound and going concern?

"Instead of the law being a guide to the clear road it leads us into a maze and the farther we go the more confusing the maze becomes and the harder it is to find the end point of fairness and justice."

It is obvious that some fundamental thinking on the effect of the tax structure on the economy of the country is sorely needed. There is hope that it may come from the committee on tax policy appointed by Congress.

The Fair Trade Battle and an Idea . . .

The judicial and enforcement problems in the federal and state courts facing fair trade are of serious concern to the cosmetic industry, which in the words of Senator Humphrey "has accepted the fair trade principle as a keystone to a free, competitive and dynamic economic life."

The legislatures of 45 states, Congress and the highest courts of 17 states have placed on fair trade their stamp of approval.

The battle against fair trade now seems to have shifted to the individual states. Six have erected a "double standard" of due process, thus refusing to recognise the pronouncements of the U. S. Supreme Court that fair trade laws satisfy all of the requirements of due process of law. In Massachusetts a federal judge refused an injunction to Colgate-Palmolive Co. against a retailer who, without objection from the company, issued trading stamps. The court held that issuing trading stamps was a form of price cutting. If manufacturers who wish to maintain resale prices are also going to have to police all retailers on the trading stamp issue, fair trade may be almost fatally impaired.

Despite the basic value of fair trade and its usefulness in preserving orderly competition, suppose it is finally wiped off the statute books, what would happen? Perhaps an answer may be found in the history of the workmen's compensation law.

After bitter opposition from manufacturers generally a workmen's compensation law was passed in New York state shortly after the turn of the century. Despite its passage its opponents continued to fight violently against it until the obliging Court of Appeals declared it unconstitutional. The glee of the victors however proved to be short lived. After a few years experience without it they found out to their dismay that the law had provided sound protection in an economical and highly satisfactory way. The principle, like that of fair trade, was fundamentally sound. Then, inspired by a powerful newspaper, another workmen's compensation law was introduced in the legislature and easily passed. It has been in effect for years. Today the law has no opponents and it is doubtful if even its original opponents would do without it. It was needed. If fair trade goes, what is there to take its place? It is needed.

Growing Population Alone Not Enough . . .

At three of the recent conventions in the allied trades speakers cited the growing population of the United States as a sure source of potential new business and prosperity. It isn't a sure sign. It is true only if the increase in population is accompanied by purchasing power. Otherwise China and India, for example, with their dense populations would be the most prosperous countries in the world instead of the reverse. It has even been argued that if the wage scale in a progressive country like England were increased from top to bottom the prosperity of the country would rise just as the prosperity of the United States rose when, some forty years ago, Henry Ford established his $5 per day minimum wage which gave many thousands of workers the means to purchase the goods and services they needed. If business can provide our growing population with fairly steady employment at good wages, the prosperity of the nation will increase. A tree grows from its roots, not from the top down. If the roots are well nourished, the tree will thrive.

Exclusive Dealing Under Fire . . .

The principle of exclusive dealing—the method by which a manufacturer ties up a retailer as his exclusive agent—is under fire. The trend against such practice began in the mineral oil field. In a decision in 1949 the U. S. Supreme Court condemned forcing dealers to sell exclusively Standard Oil of California products. Heeding the decision thereafter the Socony Motor Oil Co. assured its dealers that they had a right to buy competing products. Then manufacturers of hearing aids, reading the handwriting on the wall, discontinued their exclusive dealing practices. Following this many private anti-trust suits were brought in the automobile industry which had been built up by this method. Last year Congress passed legislation to aid anti-trust claimants. Now triple damages are no longer mandatory and as a result courts and juries are less hesitant in awarding damages. Once a trend of this sort starts it usually spreads and widens its scope. It is conceivable therefore that other industries may find it expedient to revise some of their methods of distribution if the trend continues to grow.

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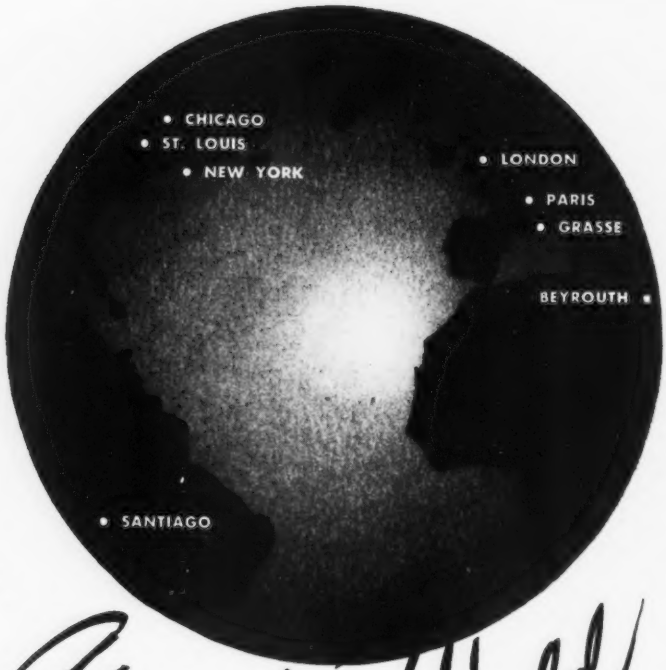

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TECHNICAL abstracts...

Diagnostic Value of Skin Testing: Appreciation of many a valuable diagnostic procedure may be lost through its injudicious use. As pointed out by Peshkin in this issue (page 820) skin testing with allergens is no exception. Skin tests with food allergens are of especially limited value. Matheson[1] says emphatically that skin tests should not be done routinely without first obtaining a history and physical examination if for no other reason than to determine what allergens to use in making the tests. Skin tests are of diagnostic value only if interpreted in the light of the clinical findings.

Even in a person with a known clinical sensitivity to an antigen the skin test may be negative. This sometimes leads the physician to conclude wrongly that the allergen is no longer potent or that the patient has nonreactive skin. Peshkin points out the need for standardization of antigens, as at present those produced by different laboratories vary widely in potency when fresh. He also points out the disadvantages in using test solutions containing a group of related allergens. False positive tests due to contamination of a syringe or a test solution with an allergen other than that being tested are probably more frequent than is generally realized.

Opinion is still divided as to whether allergic skin reactions change. Matheson concluded that positive skin tests to inhalants rarely become negative with avoidance of the food causing the allergy. Studying the same problem, Tuft and Heck[2] found that a patient may acquire new sensitizations to foods, especially to foods he commonly eats. They also found that there is some decrease in general cutaneous reactivity in patients over 50 years of age. It may be concluded that, because false negative and false positive skin reactions to all kinds of antigens are common, no plan of treatment should fail to consider the evidence of clinical sensitivity. By the same token, the clinical response is the only reliable guide to a patient's progress. Skin testing with food antigens especially is of restricted value, and in children elimination of foods from the diet solely on the basis of skin tests may seriously interfere with nutrition and at the same time not help the allergy.

1. Matheson, A.: Skin Tests and Their Value in Pediatric Allergy. Pediat. Clin. North America 1: 929-942 (Nov.) 1954.

2. Tuft, L., and Heck, V. M.: Studies in Sensitization as Applied to Skin Test Reactions: I. Do Skin Test Reactions Change? J. Allergy 25: 340-353 (July) 1954. *Thru J.A.M.A. March 5, 1955 P. 825. Vol. 157, No. 10*

Light-Protection Agents. Konrad L. Zirm. *Austrian 181,369*, Mar. 10, 1955. For making antierythema compns., 9,-11,13-octadecatrienecarboxylic acid (I) esters, preferably the triglycerides, are emulsified by aid of emulsifiers, e.g. with lanolin and H_2O. Preferably, the I esters are dild. with suitable oily solvents, e.g. groundnut oil. Thus, 5 parts of an emulsifier, e.g. glycerol monostearate, is emulsified with 65 Vaselinum album and 30 parts by wt. of a concentrate contg. 80% glycerol esters of I. Or, 20 parts I ethyl ester is dissolved in 80 parts groundnut oil or paraffin oil to give a product which on application on the skin protects it against erythema. Thru *C. A. 49*, 5785g.

Solutions For Permanent Hair Waving. Eau de Cologne-fabriek. J. C. Boldoot N. V. *Dutch 75,320*, July 15, 1954. For permanent waving at a temp. above 60°, concd. aq. solns. of urea, biuret, thiocyanates, or dicyandiamide are used. The pH of the solns. lies between 6 and 8. Thus, a satd. soln. of urea is used at 70-80° for 30-45 min. Thru *C. A. 49*, 5788g.

Volumetric Determination of Undecylenic Acid and or Its Salts. Maria Masotti (Univ. Ferrara, Italy). Atti accad. sci Ferrara *30*, 23-6(1953).—Undecylenic acid (dissolved in a little caustic alkali soln.) or its salts were detd. satisfactorily by treating with excess of 0.1 N $KBrO_3$, then with 5-10 cc. concd. HCl, and finally with 1-2g. KBr. Allow to stand 5 min., and titrate the bromate excess with 0.1 N $Na_2S_2O_3$ (after adding 1-2g. KI). The use of I for oxidizing instead of bromate was unsatisfactory because of the long time required for complete oxidation. An excess of 0.1N KIO_3 soln. in the presence of 5-10 cc. concd. HCl, with 1-2 g. KI added immediately, was a good substitute for $KBrO_3$ (q equiv. of I per mol. of undecylenic acid). *Thru C. A. 49, 1487i*

Effect of Topically Applied Stannous Fluoride on Dental Caries. Experience in Children. Charles L. Howell, Charles W. Gish, Roy D. Smiley, and Joseph C. Muhler.—*J. Am. Dental Assoc. 50*, 14-17(1955).—An unbuffered 2% SnF_2 sln. was significantly superior to an unbuffered 2% NaF soln. in reducing dental caries experience in school children. *Thru C. A. 49, 4167.*

Polishing Composition. Chester C. Currie and Charles W. Todd (to Dow Corning Corp.). U.S. 2,698,805, Jan. 4, 1955. An emulsion polish is made from hydrocarbonsol organopolysiloxane 2-15, hydrocarbon 10-45, Al stearate 0.5-3, and H_2O 37-87.5%. *Thru C. A. 49, 4312*

The Chemistry and Biology of Sebum. II. G. Miescher, H. Lincke, and P. Rinderknecht (Dermatol. Universitatsklinik, Zurich, Switz.). *Dermatologica* 109, 65-74 (1954) (in German); cf. *Dermatologica* 106, 76 1953).—The fatty acids were isolated from sebum and methylated in ether soln. with diazomethane. The Me esters were sepd. into 20 fractions by vacuum distn, 105-150°. Aliquots of the fractions were hydrogenated. The bactericidal activity of each of the fractions and its hydrogenated form was compared on *Streptococcus hemolyticus, Escherichia coli, and Staphylococcus aureus*. Most of the fatty acids (35-40%) possessed 16 C atoms, and 50% were saponifiable substances; stearins and lanolin in the presence of added cholestrol (colorimetric method); triethanolamine; glycerol in the presence of triethanolamine (colorimetrically); and heavy metals. The detn. is simplified and adjusted to fit the conditions of an av. analytical lab. *Thru C. A. 49, 1945g*

Determination of Thioglycolic Acid in Cold Wave Preparations in the Presence of sufites. F. Strache and H. J. Mierau (Hyg. Inst. Hansestadt Hamburg, Hamburg, Ger.). Deut. Apoth.-Ztg. ver. Suddeut. Apoth.-Ztg. *95*, 55 (1955).—A sample corresponding to 0.01-0.02 g. $HSCH_2CO_2H$ is treated with 10 ml. 70% EtOH, 1 ml. 25% H_2SO_4 is added, CO_2 is passed through the soln. for 30 min. to remove sulfite SO_2, and the soln. is titrated with I. Thru C.A. *49*, 7814b.

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DESIDERATA

Maison G. deNavarre, F.A.I.C.

New Antiperspirant

After considerable research, a new complex salt of aluminum, capable of being incorporated into antiperspirant-deodorant cologne sticks and giving real antiperspirant properties, has been developed. The new substance is called a sodium aluminum chlorhydroxide lactate complex.

The material has been used and skin patch tested. It is reported to be non-destructive to fabric.

This new aluminum complex is sold (like sodium zirconium lactate) as a concentrated solution containing 40 per cent w/v of the active ingredient. Users are protected by the suppliers' patents and patents pending.

The solution represents about 8 per cent Al_2O_3, 21 per cent lactic acid, 5.5 per cent sodium and 2.8 per cent chlorine. The concentrated material has a pH of 8.5. It takes about 20 per cent of *active* complex to be effective. With the pH on the alkaline side, it is easy to see why it is compatible with gelled sodium stearate-alcohol deodorant-antiperspirant sticks.

Molds

A recent publication by Hyde, *et al*, (Brit. Med. J., *1*, 886, 1956), indicates that in England, during the summer months in particular, there is an abundance of spores in the air. Among those mentioned are Cladosporium, Pullularia, Penicillium, Phana, Aspergillus, Botrytis, Sporotritrichium, Alternaria and Candida (Monilia). These, according to the author are causes of many cases of asthma.

Our concern, however, is with the fact these spores are the seeds of spoilage in manufactured products not properly preserved. And what is proper preservation?

Up to a short time ago, the *p*-hydroxybenzoates were practically without equal for safety and effectiveness. Recent work however, doesn't support this old belief. There are inactivators of any antiseptic or preservative that has a hydroxyl group as such or in the carboxyl pole. Thus, along with the *p*-hydroxybenzoates one finds, bithionol, dichlorophene, hexachlorophene, DCMX, sorbic and benzoic acids to name common preservatives to be inactivated.

So, there is only one way to be sure that a product is adequately preserved; test it out using the gamut of common microbiols, varying the pH and temperature conditions.

Lecithin

Wonder why this material is taking so long (twenty years more or less) to get recognized as a valuable cosmetic ingredient?

Some people have told me it decomposes in emulsions, a fact I can't buy at face value. Earlier experiments don't support this. Yet Lecithin should have a lot of interesting properties of cosmetic significance.

It is said to have buffering properties as in shampoos. Supposedly better than eggs, cheaper and easier to incorporate.

It has emulsifying properties overlooked by many. That makes it a potential basic or auxiliary emulsifier.

There are numerous varieties, some entirely free from plasticizing oil, or where the soybean oil is replaced by other fats. In fact, there are so many types that one must fit most any purpose.

It would seem to be a natural ingredient for use with lanolin for it too tends to favor w/o emulsions. In nature it seems to be associated with sterols, so why not use it that way in production?

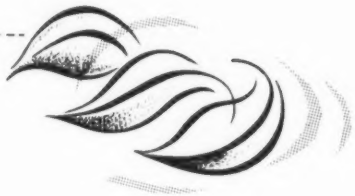
Quotations Again

When I get started on something it takes a lot of doing to stop me.

An earlier issue pointed up the fact that the nationals of a country tend to quote their own literature more than that of a foreign country. So, as I went through a bunch of foreign (not U. S.) journals, the quotations in the bibliography were noted. Here is a total figure: 1,052 foreign references and 275 U. S. references in a mixed group of French, German, Dutch, British and Italian trade or and scientific journals. This count is all the more important because a recent letter from a "foreign" subscriber to the Am. Assoc. for the Adv. of Science publication *Science*, also berated Yankee scientists for failing to quote foreign literature.

My next report will be on a long series of U. S. publications, scientific and trade types.

Many times, the subject matter was conceived in a given country and much of the published literature was in journals of that coun-



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try. Hence bibliography by others will make heavy reference to the literature of that country and sometimes one research group or individual. Such cases in point are one French publication listing 22 U. S. references and 86 foreign ones while one British article listed 21 U. S. and 7 foreign references. Oh, boy! what a subject for someone to work on!

Infrared

It is fascinating to hear and read of the remarkable work in resolving compounds or mixtures that can be done with an infrared unit. Fine differences apparently are difficult to detect, but as a control device it is the last word, I am told.

One can see a lot more use for it if it could be used in finished product control of emulsified cosmetics. It could cut analytical time by hours and give better results.

Perhaps the equipment makers can solve this too. Not only is it a matter of the water attacking the sodium chloride cell, but also the water filters out a large part of the infrared spectrum.

Notes

Chilson has his running battle with nepotism, among others. . . . Mine is with the misery of mergers, in all divisions of management and research—You never know what they are going to do, whom they will retain or how long—it is mental torture of the worst kind because it usually affects men over forty years of age—many lives are literally wrecked forever—There is much to be said for big business, but just as certainly there is a lot against it too. . . .

Under the guidance of Professor Louis Zopf, workers Aguilar and Blang recently published an article in the J. Am. Pharm. Assoc., *45*, 498, 1956, on the relative bacterial activity of some complex aluminum salts, such as formoacetate, basic formate, chlorohydroxide complex and the aminoacetates. It is a good paper and all in the field of deodorants should read it. . . . Dehydracetic acid went up like a skyrocket in preserving cosmetics, drugs and foods and then it went out. Now Schimmel, Mattencci and Boger find that it slows down the excretion of penicillin, which may be desirable in some cases. Of course it is reputed to have "antienzyme" activity in dentifrices too. . . . Can't say I'm too excited about results with straight PVP hair aerosols—cumulative wet-back is common complaint. . . .

BOOK Reviews

COSMETICS: THEIR PRINCIPLES AND PRACTICES. Ralph G. Harry, F. R. I. C., 6 x 9 in., 786 pages, 120 illustrations. Cloth covers. Chemical Publishing Co. 1956. Price $17.

This book corresponds to the fourth British edition of *Modern Cosmeticology*, which is now out of print. It contains a wealth of medical and technical data on the skin and its care, the hair, the teeth, the eyes, body, etc. An effort has been made to present formulas which typify the present trend in cosmetic formulation. To do this the author has drawn on the most authoritative research published in the United States as well as abroad. There are seven sections with appropriate subdivisions under each one: The Skin, The Care of the Face, The Care of the Mouth, The Care of the Eyes, The Care of the Hair, The Care of the Body, The Care of the Hands, Cosmetic Facts and Fallacies, and General Aspects of Cosmetic Formulation. All told it is a very useful work for chemists and cosmetic technicians as well as for students.

PHARMACEUTICAL FORMULAS VOL. II, 5½ x 8 in., 952 pages. Eleventh edition. Cloth covers. The Chemist and Druggist, London, England. 1956. Price $9.00.

The significant part of this carefully compiled work to manufacturers of cosmetics falls within the sections totalling 300 pages, of formulas for perfumes of all kinds, liquid, solid, perfumed cards, sachets, pot pourris, fumigating perfumes, movie and other sprays; Cosmetics, Skin Lotions and Creams, for all purposes; Hand and Nail Preparations; Hair Preparations; Various Toilet Preparations and Dental Preparations. A general discussion in terse informative terms on each major branch of the foregoing adds to the value of the many formulas to be found on perfumery and cosmetics. In addition the book contains 652 pages of formulas on culinary and household requisites, cleaning materials, polishes, varnishes, adhesives, lacquers, writing materials, photographic formulas, horticultural and agricultural preparations, pest exterminators, veterinary formulas and other products. Over 6,600 entries in the index add to the value of the book.

TRADEMARK MANAGEMENT. Stewart W. Richards, Edgar S. Bayol, Marcel Deschamps, John L. Esterhai, Jack T. Redwine, Norman St. Landau and W. G. Reynolds. 6 x 9 in., 130 pages. Illustrated. Cloth covers. United States Trademark Assn. 1955. Price $5.

This useful book in nontechnical language is intended primarily as a guide for any business which manufactures, advertises and sells a trademarked product. It is the result of three years of research and data compilation on the part of a special committee set up by the association. The writers are chiefly men who have been staff counsels to large corporations; and they present the practical problems that arise in the selection and management of trademarks in a simple and helpful way. An idea of the contents of the book may be had from the following chapter headings: Choosing the Right Trademark; Registration; Proper Use of Trademarks; Internal Administration of Trademarks; Trade Names and Foreign Problems. A well compiled index and a list of trademarks, names and slogans add to the value of the work. The book tells the business man how to find out what he can use and what he cannot employ as a trademark. It outlines proved methods of protecting a trademark after it has been adopted and registered. It is an indispensable guide on the complex problems of trademarks for those who make, advertise or sell a trademarked product.

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QUESTIONS & ANSWERS

1202: MOISTURE CREAMS

Q. *Which scientific principle, physical or chemical, is it, that separates the now advertised "Moisture Creams" from other face creams? We are thinking of creams like Elizabeth Arden's "Moisture Cream," Dorothy Gray's "Satura" and Revlon's "Moon Drops." Could you give us any literary directions or any recipes? Does any new base enter into these creams as an active constituent? K.N., Sweden.*

A. The background or the scientific basis for calling a cream "moisturized" is based on the addition of such ingredients as cause skin to remain moist. Among these ingredients would be the host of humectants or polyols, such as glycerin, sorbitol, polyglycols and so forth. Then, of course, there is polyvinylpyrrolidone which is substantive to skin and is somewhat hygroscopic. This has a possibility of being incorporated into some of these products. As to new bases, we would like to think that some of the ethylene oxide adducts of higher alcohols, for example, or the ethylene oxide adducts of some of the polyol esters, would find more place for use in such a formula than the standard alkaline soap-type emulsifiers.

1203: AZULENE

Q. *I would greatly appreciate some reference as to availability of Azulene in the United States. D. R. P., New York.*

A. Commercial quantities of Azulene are now available in the United States, through Dragoco, Inc., 432 Fourth Ave., New York 16, N. Y.

1204: BARRIER CREAM FORMULA

Q. *I am interested in a "barrier" cream formula containing a silicone and a healing agent, which I am developing for a large cosmetic firm. M. V., California.*

A. A formula suggested by Tajkowski and Reilly consists of:
Stearic acid 15%; Isopropyl palmitate 2%; Silicone fluid (1000 cs) 10%; Potassium hydroxide 1%; Sorbitol syrup 18.3%; Water, preservative and perfume to make 100%.
We are asking the principal producers of silicones to send you full data on their products.

1205: DEEP PORE CLEANSER

Q. *We are interested in formulas for deep pore cleaners suitable for various skin textures such as oily, normal, and dry. L. C. C., Wisconsin.*

A. Your letter is so general that it is impossible to help you in any specific way. If you have in mind a liquid product, you are obviously going to want to stick with something nonionic. Just which nonionic is best for the purpose is something we are not in a position to tell you. Our suggestion would be to contact firms such as Atlas Powder Co. and Antara Products, or others of the same type and ask for samples of nonionic material that have these properties and which are safe to use regularly on the skin. Furthermore, the use of phrases, such as, "deep pore cleaners," in our opinion is a rather loose practice unless the products are truly deep cleansing. To establish this would require a great deal of test work and obviously THE AMERICAN PERFUMER is not in a position to do this type of work for readers. In our opinion, it would be impossible to formulate such a cleaner for all types of skin, such as, normal, oily and dry.

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RESEDALIA

An Acetal resembling the aroma of Reseda Mignonette. It is a valuable addition to all floral bouquets, and as a modifier for the purpose of rounding off all types of compositions.

VERONOL

An Aldehyde of great potency; imparts the aldehydic top note to perfumes to which it is added. It is extremely valuable as a modifier. Used from 1/10 to ¼ of 1%.

ROSANOL

An Acetal, ideal for all rose type compounds, because of its fine character, great lift and extreme stability.

The advantage of these aromatic chemicals is that their great purity permits their use in the most luxurious perfumes . . . and their low cost makes them feasible for even the most inexpensive soap fragrances.

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Photos courtesy National Film Board of Canada.

ESSENTIAL OILS OF THE CONIFERS

PART I

H. K. THOMAS, Ph. D.*

IF WE observe the essential oils now available on the world market from the botanical viewpoint of their classification in families and main classes, it is readily apparent that the majority of essential oils is obtained from higher plants, among which is the sub-group of the *angiospermae*.

A few of the *angiospermae* families, such as the *labiatae*, *umbelliferae*, *lauraceae*, *rutaceae*, *myrtaceae* and *compositae*, include a particularly large number of varieties that yield the finest scents and are therefore cultivated for production. The chemical composition of these scent principles of the essential oils is quite as diverse as their odor.

Over against the *angios permae* is the other sub-group of higher plants, the *gymnospermae*, to which the plants known as overgreens or conifers belong.

The variety of *gymnospermae* is far less than that of the *angiospermae*, amounting to about 550 as compared with approximately 250,000 kinds of *angiospermae*. Though their diversity and the preciousness of their scents undoubtedly assure the essential oils of the *angiospermae* a leading place in perfumery, nevertheless the essential oils obtained from the conifers are, in spite of the sameness of their odor, no less significant. A comparison of the quantities of essential oils annually obtained from the *gymnospermae* with the yield from the *angiospermae* will convince anyone of this fact.

A conservative estimate, taking into consideration the appreciable variations in annual production, will put the amount of essential oils obtained from the *gymnospermae* at a minimum of from 150,000 to 200,000 tons, and from the *angiospermae* at between 15,000 and 20,000 tons. The quantity obtained from the *gymnospermae*, especially from conifers, clearly exceeds the total amount of the *angiospermae* oils many times.

Qualitatively, however, the proportion is just the reverse. The main quantity of conifer oils—turpentine oils and wood turpentine oil—are very low in price. On the other hand, the *angiospermae* oils are very much more expensive, sometimes indeed, in the case of some flower oils such as orange flower oil, jasmin flower oil or extract, and attar of roses, reaching a tremendous price value per kilogram.

The great technical importance of essential oils obtained from conifers is reflected in the significant production figures. It is interesting to observe, at least in the main outlines, the various essential oils of these trees, as well as their distribution, the extraction of the oils, their properties and composition, and finally their practical uses.

Conifers in all their varieties are extremely wide-

*Research chemist, Dragoco, Holzminden, Germany.

spread throughout the earth. Lovely extended evergreen forests can be found in vast quantities not only in the temperate zone, but also in the mountains and plateaus of the sub-tropics and tropics as well.

Conifer Forests in Europe

Wherever one turns in Europe, whether in the north or the south, everywhere one finds great forests of first, pines and spruce, and in the mountains dwarf pines, too —to name only the more common varieties.

In Germany the wealth of conifer stands is to be seen in the great forests of the Bavarian Alps, as well as in the Harz, in the Thuringian, Bohemian and Black Forests, and so on, along with the many extensive woods in the low country.

In other European countries the extent of the conifer forests is even greater. Especially rich in forests are the northern lands—Norway, Sweden, and Finland—whose large conifer stocks supply the wood for a flourishing cellulose and paper industry. Poland, too, boasts extended pine and fir forests which are used for the production of fir oil and the distillation of pine-needle oil. Czechoslovakia, Hungary, Yugoslavia and Austria dispose of important pine, silver fir, spruce and juniper forests.

In the Alpine regions of Austria, Yugoslavia and Italy there are considerable stands of dwarf pines, also to be found to a lesser extent in the Bavarian Alps. In the Apennines, Italy has big quantities of juniper trees, and in Tuscany extensive spruce forests.

The Jerusalem pine that is widely distributed throughout Greece is tapped in considerable quantity for the production of turpentine and turpentine oil. The big stretches of cluster pine woods south of the Garonne delta in the Landes region in southern France have long been tapped for the well-known French oil of turpentine which they yield. Cluster pine stands in Spain and Portugal are similarly utilized.

Huge spruce forests cover the northern part of the U.S.S.R., extending throughout all of Siberia as far as the Pacific coast. Forests just as vast stretch out over the plains and mountains of Canada, Alaska, and the United States.

In the Far East, in India, Burma, Indonesia, China, and Japan, various kinds of conifers are to be found. On the Himalayan slopes from Afghanistan to Bhutan, often as high up as 6,500 or 8,000 feet, there grow large quantities of *Pinus longifolia*, a kind of spruce which is tapped to a considerable extent.

The Himalayan cedars are well known. The big spruce forests of North Burma could also be exploited if only transportation conditions were better.

North Sumatra in Indonesia, where turpentine production in the mountain forests is well along, yields certain quantities of oleoresin and turpentine oil. In the Philippines, too, and especially on the main island of Luzon, the spruce stands are tapped.

On the main Japanese island of Hondo and on the smaller island of Shikoku, the cypress-like Sugi and Hinoki trees, natives of Formosa, thrive particularly well. The climate of these islands is too warm for pines and firs, which are better adapted to the cooler climate of the island of Hokkaido farther north. Here large quantities of *Abies sachalinensis*, *Abies mayriana* and *Picea jezoensis*, used for the distillation of essential oil, are to be found.

Conifers that form a part of Australian flora and serve for the production of essential oils are the Huon pine, a *dacrydium* variety, *araucaria*, and a *callitropsis* variety which is a native of New Caledonia.

All conifers contain essential oil in their wood as well as in their needles. A macroscopic observation of cross-sections made from needles of the spruce, pine, silver fir, and other conifers often reveals the presence of several larger or smaller resin channels containing essential oil along with the resin.

A familiar experiment will demonstrate the content of essential oil in conifer needles: If a fir branch is held over a candle flame, the needles catch fire with a crackling noise and a small darting flame is caused by the evaporation of the essential oil when it catches fire.

In the wood, resin is present in schizogenic secretory receptacles that are often rather large. It can be set flowing by notching through the bark and the outer layer of wood of the tree. Exudation then ensues, with the resin serving as a pathological secretion for closing the wound as quickly as possible in order that no rot agents may penetrate. The resin balsam or turpentine which emerges is a mixture of resin and essential oil.

If the freshly tapped resin balsam, which is at first soft and viscous, is exposed for a long time to air, it hardens and becomes rather firm because the greater part of the essential oil has evaporated. If gathered while fresh, turpentine yields about 20 per cent essential oil, the turpentine oil.

Direct Steam Distillation

Though it is possible to separate the turpentine in this manner, by deliberately wounding the wood, the essential oils of the conifers can also be obtained by direct steam distillation. In this process, only the needles or young branches with needles, chopped wood from the trunk, and the roots can be placed under distillation.

Whereas the turpentine oils extracted from exudated resin have a peculiar smell which is pretty much the same, the essential oils obtained through distillation from fresh branches possess the typical balsamic and refreshing fir odor so popular everywhere. The essential oils obtained in this manner, which play the chief role in perfumery, are generally designated by the somewhat unfortunate name of pine-needle oils.

In further installments we shall discuss the production of turpentine resin and oil, the distillation of other pine-needle oils, and their properties and practical uses.

THE oleoresin from the longleaf or slash pine is the raw material for the gum naval stores industry—one of the oldest in America. There are reports that turpentine was obtained from Nova Scotia pines as early as 1606, and that plans were made for the production of turpentine in the Virginia Colony as early as 1610. Very little distilled spirits were produced in the United States before the nineteenth century, but large quantities of tar and pitch were made in Colonial days. The term "Naval Stores" is a survival from the time when they were used in quantity in the construction and repair of wooden ships, and for the preservation of rigging.

—Abstracted from "The Essential Oils," Volume VI, by Ernest Guenther.

THOUGHTS ON

Advertising Perfume

There's no formula, but . . .

JAY H. SMOLIN*

WHAT are you selling when you sell a perfume? Not a liquid, clinging scent, certainly. Few people would pay $20 an ounce for a scent. Rather, perfume is an ephemeral product, unlike almost any other you can name. Not really a product at all, in the usual sense of the word, with special features and advantages and distinguishing qualities. It is more like a magic cloak.

To sell perfume, you must sell a bit of enchantment, poetry and music, Cinderella dreams. You must sell aspirations of romance, luxury, sophistication. You must sell irresistible feminine fascination in little bottles.

That's rather a large order, outside of a full-length novel or motion picture. Nevertheless, the really successful perfume advertisements have not been far from one-page condensations of a novel or movie. How is that possible? They've suggested infinitely more than they've said or shown. And the closer they've come to epitomizing romance in one campaign, the more perfume they've sold.

However, there's no yardstick you can apply in advance to predict the potential success or failure of a perfume campaign. In selling other products, such as foods or drugs, certain fundamentals exist as helpful guides. An advertiser experienced in the packaged goods field, for example, can reasonably expect to put over a new brand by following techniques and procedures which have been tested and proved over and over again.

But what experience or background will enable an advertiser to create consistently outstanding campaigns like that for *Tabu*, which so captured the popular imagination that in five short years, sales zoomed from $217,000 to $5,200,000 . . . almost 2,400%?

If there is no formula, at least a number of things are evident. We cannot stress intrinsic values. No further confirmation is needed than the cost figures of a typical perfume retailing at $15 an ounce, plus 10% tax.

We must appeal to the emotions, not to reason. No logical arguments will convince a woman that one perfume is superior to another. One brand has no appreciable advantages over another, except . . . and it's a big exception . . . in the minds of women. Whatever advantages there will be must first be created by the advertiser. The physical differences that exist are differences of scent, and mostly indescribable. How can they be advertised . . . "six degrees more potent aroma than leading competitors"? . . . "compare the fragrance with that of your present brand"? No, the appeal must be based, not on the product, but on what it will do for the user. That's usually true of all advertising, but doubly so in this case.

A few brands, by now most highly reputed, like Chanel No. 5, advertise their names and no more. But the number who can afford to do that is small, indeed. Many brands may appear at first glance to be advertising their names only. Actually, they do incorporate much of the romance we have indicated is so necessary. After all, a mood can be built up in many ways; not only through the use of copy and explicit illustrations. Often a headline is all that's required . . . or a hand-lettered logotype . . . or a special layout treatment . . . a modern art background . . . a skillfully displayed package. Sometimes an implied association with Paris is employed . . . even the connotation made by the name of the perfume. But whether by direct portrayal or mere hint, *something* must almost invariably put across the idea that the perfume will inexorably attract the desired man, or men, to the wearer.

It's interesting to note that the advertisements, as well as the perfume, must appeal to women, although men buy, seasonally, as much as 90 per cent of all the perfume sold in this country, mainly before Christmas. Tests and surveys have indicated clearly, however, that while men may do the buying, women choose the brand. If women don't like a perfume, it won't sell. The reasons why they like or dislike it may lie in the scent, the name, the package, the advertising, or more likely, in a combination of many of these. The more factors that contribute to making a woman feel that the perfume will do something wonderful for her . . . the better. It's the total effect on a woman that counts.

All of which points up the logic of thinking about all the elements *together* when introducing a new perfume. All should be developed as part of the same central idea. The name may suggest a package or vice versa . . . perhaps the advertising campaign will come first and lead to the name and the package.

A popular fallacy exists in some circles to the effect that an expensive perfume will sell in direct proportion to the cost and elaborateness of the package. Some perfumes are put up in bottles costing several dollars. Others priced the same and equally successful, are packaged in 25 cent containers. It's the total impression made by all the elements that counts. The extent to which a package appeals to women bears little relationship to the cost.

*Advertising and Selling.

THE dye forming intermediates used in these preparations are primarily ortho and para benzene diamines and aminophenols and derivatives of these compounds. The oxidation of para-phenylenediamine is believed to proceed in the following manner:

1. Para-phenylenediamine is oxidized to quinone-di-imine.
2. Three moles of quinone di-imine condense to form an indamine, Bandrowski's base.
3. Bandrowski's base is further oxidized to an azine dye.
4. The azine dye combines with keratin to form an azine-keratin complex.

Only those intermediates which can be oxidized to a quinoid structure have hair coloring properties. The meta-diamines and aminophenols in the pure form do not form dyes upon oxidation but nevertheless they are very useful when used with para diamines. This will be shown later. Meta compounds which color hair do so because of the presence of ortho or para isomers or impurities. In a study to determine color characteristics and dye affinity for hair, a large number of dye intermediates were tested under controlled conditions. These intermediates were dissolved in 1% concentration in a water-alcohol solution adjusted to a pH of 9.5 with ammonium hydroxide. The dye solution was mixed with equal parts of twenty volume hydrogen peroxide and human grey hair and bleached white Yak hair dyed for 15 minutes at 80° F. The results are tabulated in Tables 2-7. The purity or grade of the compound has been designated as Chemically Pure (CP), Practical (P), or Technical (T).

Note the difference in results between compounds 2 and 3, and compounds 5 and 6. These dyeings were made in a solvent that gives colors of maximum intensity in a minimum of time. The concentration of intermediate, solvent, alkalinity, development time plus other factors all determine the shade and depth of color. The reader may wonder why Yak hair is used in these tests especially since its affinity for hair dye is usually greater than human hair. Yak hair is useful for control purposes and for determining slight changes in color effects that might not show up too well on human hair.

The aminophenols are used extensively in oxidation hair dyes. They are especially useful in the gold and red shades and they greatly modify the color effects of paraphenylenediamine even when present in very small amounts. Ortho aminophenol is invaluable in obtaining the drab shades such as ash browns and ash blondes.

Compounds 13, 14, and 15 are strong irritants which are not recommended for use in hair dyes. They demonstrate the color changes that occur when the amino group of p-phenylenediamine or p-toluylenediamine has an alkyl or similar group added to it.

The only intermediate above that is used to any extent in hair dyes is p-methylaminophenol. It is marketed

Table 2—Aromatic Diamines.

No.	*Compound*	*Grade*	*Human Hair Color*	*Yak Hair Color*
1	p-phenylenediamine	P	dark brown	black
2	m-phenylenediamine	P	gold	gold
3	m-phenylenediamine	CP	no color	no color
4	o-phenylenediamine	CP	brassy gold	greenish yellow
5	2,4-diaminoanisole	P	drab blonde	greenish grey
6	2,4-diaminoanisole	CP	no color	no color
7	p-toluylenediamine	T	lt. reddish brown	purplish brown
8	p-aminodiphenylamine	T	dark grey	black
9	2,4-diaminodiphenylamine	T	violet brown	purplish brown
10	4,4'-diaminodiphenylamine	T	grey	bluish black
11	3,4-diaminotoluene	CP	blonde	golden brown

PART II: TECHNOLOGY OF

Modern Oxidation

HAIR DYES

GUS S. KASS

Technical Director, Lanolin Plus, Inc.

No.	*Compound*	*Grade*	*Human Hair Color*	*Yak Hair Color*
12	p-aminophenylglycine	CP	lt. warm brown	dk. purplish brown
13	p-aminodiethylaniline	CP	lt. ash blonde	neutral grey
14	2-amino-5-diethylaminotoluene	CP	greenish blonde	pink
15	N.N -di-sec. butyl-p-phenylenediamine	T	lt. auburn	magenta

Table 3—N-Alkyl Para Diamines.

as the sulphate salt and as such is the popular photographic developer compound known as Metol, Pictol, or Photol.

Compound 27 (also known as picramic acid) is unstable and not recommended for use in hair dyes. The nitro derivatives in general are important dye forming intermediates and are useful in most shades.

The sulphonic acid derivatives or their salts are not used to any extent in modern oxidation dyes. At one time it was felt that these compounds were the answer to the toxicity problem and in fact it was found that by introducing a sulphonic acid group into the molecule, relatively non-irritating compounds were obtained. It also had an adverse effect. The addition of a sulphonic acid group greatly reduced the tinctorial value with the result that satisfactory shades could only be obtained by lengthy development. This made these compounds impractical for modern high speed oxidation dyes.

The compounds shown in tables 2 to 7 were evaluated under conditions that produced maximum color intensity on hair in a minimum of time. Although many of these intermediates will produce very attractive and desirable shades under these conditions, they are of little value of modern hair dyes in which color development is completed in 15 to 40 minutes. Soaps, surface active agents, superfatting agents, and combinations of these all tend to reduce the affinity of the developed dye for the keratin of hair. Only these intermediates which yield dyes of medium to high tinctorial strength on hair are effective in the newer oxidation dyes. Very few of these compounds when used alone yield natural or stable shades on hair and many of the dyed hair swatches resulting from the studies on the dye intermediates, showed pronounced color changes when examined several months later. It should be pointed out that the shades can be stabilized and this point will be discussed under "Color stabilizers, modifiers, and other additives."

The color effects described in Tables 2-7 are descriptive only under the specific conditions of the study, and varying the dye base, pH, concentration of dye intermediate, or time of development can produce completely different color effects. Many of the compounds are technical grade materials, and the method of manufacture of the intermediate, presence of trace metals, isomers or impurities all have a very pronounced effect on the colors produced. Once a composition has been worked out it is unwise to change the source or grade of any intermediate used without carefully evaluating its ef-

Table 4—Amino Phenols.

No.	*Compound*	*Grade*	*Human Hair Color*	*Yak Hair Color*
16	p-aminophenol	P	light auburn	deep copper
17	2-amino-5-hydroxytoluene	CP	golden blonde	reddish blonde
18	5-amino-2-hydroxytoluene	CP	reddish blonde	reddish amber
19	o-aminophenol	P	deep gold	orange
20	2,4-diaminophenol	P	light reddish brown	deep coppery brown

No.	Compound	Grade	Human Hair Color	Yak Hair Color
21	o-methylaminophenol	CP	pale blonde	reddish blonde
22	p-methylaminophenol	CP	pale blonde	pale blonde
23	N-n-butyl-p-aminophenol	T	blonde	amber blonde
24	p-hydroxyphenylglycine	CP	pale blonde	pale blonde

Table 5—N-Alkyl Amino Phenols.

fect on the product. On one occasion when five different brands of ortho-aminophenol were examined under identical conditions, the resulting colors on hair were all noticeably different. It should not be necessary to emphasize at this time that the use of dye intermediates of high purity and uniformity will eliminate a great deal of frustration and grief. In 1954 Heilingotter[19] of the Netherlands published a very interesting paper on the effects on color and toxicity resulting from molecular changes in dye forming compounds. This author's findings are in close agreement with Heilingotter's.

A review of the patent literature will reveal a great many aromatic compounds capable of dyeing hair upon oxidation, but most of these patents, however, specifically cover the dyeing of fur, hides, dead hair, and feathers and the use of mordants in such dyeing. Many of these compounds could be used to dye living hair assuming of course that they are safe to use. Very few patents covering compositions to dye human hair were issued. Prior to 1915 several patents[20-22] were issued on the use of sulphonic acid derivatives of aromatic diamines and amino phenols. These resulted from efforts to find non-toxic derivatives of the hair dye intermediates then in use. A German patent in 1934[23] reveals the use of para substituted phenyl glycine to give brown, reddish and yellow dyeing to living hair. Although many of the compounds described in the patent literature are of interest, they offer no particular advantage over those dye intermediates now in general use.

Color Modifiers, Stabilizers, and Other Additives

A logical question to ask at this time is "where do we go from here?" How are these oxidation dye intermediates blended and combined to produce natural hair shades. Unfortunately there are no simple clear cut rules to assist the chemist in formulating oxidation hair dyes, but a few generalities can be made. Para-phenylene- and para-toluylenediamine are the base intermediates in the dark shades and are used in many of the light shades as well. Blonde shades are built around the aminophenols while the red shades rely greatly on para-aminophenol and certain nitro derivatives. Because of the complexity, sensitivity, and the many variables involved, a certain amount of skill and even artistry is required that can only be developed by experience. The complete hair dye cannot be assembled without the third essential component of the dye—color modifiers, stabilizers and other additives.

One of the complex problems met with in hair color matching is that the colors produced by individual intermediates are not always additive in the presence of each other. If blue paint is mixed with yellow paint in the right proportions, a green color will result. This does not always hold true for the intermediates used in oxidation hair dyes. The first oxidation stage is the formation of a quinone di-imine or quinone imine. When the diamine or aminophenol is oxidized in the absence of other reactive intermediates, condensation of the quinoid occurs to form a compound which is further oxidized to a complex dye. If other diamines, aminophenols, or phenolic compounds are present, coupling or condensation between these and the various intermediate oxidation stages will take place and other dye complexes are formed. Phenolic compounds have a pronounced effect on the colors produced by para diamines, especially paraphenylene diamine. Not only do these compounds produce desirable modifications of the colors, but they also act as color stabilizers. A French patent in 1913[24] reveals the use of such dihydroxyphenols as resorcinol, pyrocatechol, and 1-methyl-3,5-dihydroxybenzene as color modifiers to be used with aromatic diamines or their derivatives. Meyer[25] reacted the diamines with phenolic acids such as salicylic and gallic acids to obtain useful hair dye intermediates. A later French patent[26] disclosed the use of 1,2,4-trihydroxybenzene or naphthalene as a hair dye ingredient when used alone or with aromatic diamines and aminophenols. A German patent[27] even covers the use of hematoxylin as a color modifier to be used with diamines and amino phenols. In one series of experiments conducted by this author, hair was dyed with a solution of para phenylene diamine containing a molecular equivalent of a polyhydric phenol. These were in an alkaline soap base and 20 volume hydrogen peroxide was the developer. The colors obtained are shown in Table 8.

Resorcinol is widely used in modern hair dyes. The naphthols are not recommended because of possible toxicity and they are shown here only to illustrate the color variations that can be obtained.

Meta-phenylenediamines are of great value as drabbing agents and to produce the fashionable silver blonde, smoke, and steel grey shades. Although meta diamines do not oxidize to form dyes directly, they do form blue or purple shades in the presence of para-diamines. For this reason they have been included in this section dealing with additives rather than among the group of dye forming intermediates. The shades,

Table 6—Nitro Compounds.

No.	Compound	Grade	Human Hair Color	Yak Hair Color
25	2-amino-4-nitrophenol	CP	deep yellow	deep yellow
26	3-nitro-4-aminophenol	T	reddish blonde	reddish orange
27	2-amino-4,6-dinitrophenol	CP	light auburn	orange
28	2-nitro-p-phenylene diamine	T	auburn	reddish orange
29	4-nitro-o-phenylene diamine	T	greenish yellow	orange yellow

No.	*Compound*	*Grade*	*Human Hair Color*	*Yak Hair Color*
30	o-aminophenol-p-sulphonic acid	P	no color	no color
31	l-amino-2-naphthol-4-sulphonic acid	P	no color	pale orange
32	m-phenylene diamine sulphonic acid	CP	no color	no color
33	4,4'-diaminodiphenylamine-2-sulphonic acid	T	light grey	purple

Table 7—Sulphonic Acid Derivatives.

which range from blue to purple, have an unusually high affinity for hair. In 1914 Erlenbach[28] obtained a U. S. patent on the use of meta-diaminoanisole with para-phenylenediamine for dyeing hair a blue black shade. Table 9 discloses the color results when hair is dyed with a mixture of a para diamine and a meta diamine.

Polyhydric Phenol	*Color on Hair*
none	brownish black
resorcinol	dark greenish brown
pyrocatechol	dark neutral grey
pyrogallol	deep gold
alpha-naphthol	bright violet
beta-naphthol	light reddish brown
hydroquinone	golden brown

Table 8—Colors Produced on Hair by Para phenylenediamine in the presence of a Polyhydric Phenol.

The meta-diamines are used in any hair dye formulation that contains a para-diamine where it is desired to introduce a blue or purple note. When added to blonde shades in very small amounts ash blonde shades will result. This color reaction is also the foundation of such shades as steel grey, platinum blonde, silver blonde and smoke blonde. A note of caution should be entered here. These compounds must be used very sparingly. The blue tone they introduce is not as fast to light, shampooing, etc. as the other colors and aging of the finished product can reduce or even destroy the ability of the hair dye to develop this blue note. It is a tricky color to handle but it can be stabilized.

ANTIOXIDANTS

DURING the course of manufacture, the hair dye may be exposed to air and there is also some air in the neck of the bottle of the packaged dye. It is apparent from the nature of the ingredients that oxidation can occur with resulting deterioration of the product unless measures are taken to prevent oxidation. Some hair dye makers manufacture their product in an atmosphere of nitrogen and some even displace the air in the bottle with nitrogen before capping the bottle. These are certainly beneficial measures but the use of antioxidants is a more popular method of preservation and probably sodium sulphite is the most widely used antioxidant.

Although alkaline sulphites have been used in hair dyes for almost fifty years they were first used, not as an antioxidant, but in the belief that they decreased the toxicity of para-phenylenediamine and related derivatives. About 1909 Colman[29] reported the use of sodium sulphite to "detoxify" irritating oxidation products of para-phenylenediamine and was granted a patent[30] covering such use. He was also granted patents[31] for the use of sodium sulphite with para-toluylenediamine. Evans[32,33] patented the use of acetone sodium bisulphite to reduce the toxicity of para-phenylenediamine. A patent[34] was issued in England for the preparation of air-stable sulphite salts of the para-diamines prepared by treating non-aqueous solutions of the para-diamines with sulphur dioxide. The effective use of sulphite or bisulphites to reduce the toxicity of para-diamines is highly questionable. When a hair dye is mixed with a developer before use, any sulphite present is immediately oxidized to the sulphate and the course of oxidation of the dye intermediates is unaffected. Alkaline sulphites serve to prevent oxidation of the dye intermediates during manufacture and while in the bottle. The use of thioglycolic acid[35] as an antioxidant for oxidation hair dyes is also revealed in a recent patent. The amount of alkaline sulphite required in the dye composition is in proportion to the total amount of oxidizable intermediate. Therefore such shades as black or dark brown with a high concentration of dye intermediates will require more sulphite than the blonde shades which contain less intermediate.

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(Part II of 3 parts)

Table 9—Dyeings on hair with para diamine and meta diamine mixtures.

Para Diamine	*Meta Diamine*	*Color on Hair*
para-phenylenediamine	meta-phenylenediamine	purple
para-phenylenediamine	meta-toluylenediamine	purple
para-phenylenediamine	2,4-diaminoanisole	blue-purple
para-phenylenediamine	4-methoxy-6-methyl,meta-phenylene-diamine	blue-purple
para-toluylenediamine	meta-toluylenediamine	blue
para-toluylenediamine	2,4-diaminoanisole	blue
para-aminodiphenylamine	4-methoxy-6-methyl,meta-phenylene-diamine	bright-blue

USE OF Aerosols

SINCE the end of the war we have witnessed the birth of a new industry, that of the aerosols. In the United States, its birthplace, the growth has been rapid: 34 million units in 1951, 100 million in 1952, 150 million in 1953 and 170 million in 1954. Of this last figure, 82 million units contained perfumery and cosmetic products, of which 42 million were shaving creams.

In the other countries such as Great Britain, Germany and France, the start has been far less spectacular. The British seem to be reserved; according to a certain English journalist quoted by H. Streetfield (S.P.C., Dec. 1955), one million units are more than enough for the whole of the United Kingdom and the applications could be counted on one hand.

In France, several makes of perfume and cologne, and some hair varnishes are marketed in the form of aerosols. Anti-solar products and shampoos are being developed or are already on the market. But as far as we know, no production statistics have been published.

Nor does it appear that any publicity campaign has been launched to introduce aerosol perfumes and cosmetics to the public.

In the trade journals, on the other hand, a great deal has been written in the last few months on the subject of aerosols. The word "aerosol" itself was used until recently only in medical circles or by meteorologists and engineers occupied with the smoke problem in large cities. Today it is familiar to every technician of the perfume and cosmetics industries, and is used more and more loosely.

We repeat here the definition of an aerosol and a few words on the history of the subject.

An aerosol is a dispersion in air or other gas, of solid or liquid particles sufficiently fine to remain in suspension for a considerable time. The diameter of these particles is often of the order of a micron (0.2 to 10 microns), the largest being up to 50 microns (a micron is about 1/25000 inch).

Smokes and clouds are natural aerosols.

Two methods of preparation of artificial aerosols have long been known: a) mechanical dispersion; b) vaporisation followed by condensation. These methods are still employed with the most ingenious variations and filtering apparatus making it possible to choose the dimensions of the particles, as in aerosol therapy.

The traditional atomiser belongs to the first type of method; the mechanical pulverising agent is the air which is compressed either by means of a little rubber bulb, or by the squeezing of a receptacle such as a polyethylene bottle; the stream consists of droplets whose

*Roure Bertrand Fils & Justin Dupont. Reprinted from Parfums, Cosmetiques, Savons, No. 122, April 1956.

in Perfumery

A. DEMEILLIERS and Y. GUTSATZ

size depends on the form of the orifice, but they are never fine enough to form a stable mist.

Principle of Modern Aerosols

The principle of modern aerosols is quite different: the active agent to be dispersed is dissolved in a liquified gas called the propellent; this solution is held in a hermetically sealed receptacle fitted with a tube leading to the bottom, a valve and a spray orifice. Part of the propellent remains liquid, while part is converted into gas which fills the upper part of the receptacle where it creates a certain pressure. When the valve is opened, the pressure due to the propellent expels the solution consisting of active agent and propellent. In expanding, the propellent instantly becomes vaporised and thus disperses the active agent in very fine particles which may remain dispersed in the air for a long time. The dimensions of the particles, and thus the stability of the aerosol mist, depend principally on the vapor pressure of the propellent and the form of the valve.

The tendency today is to use the word "aerosol" for any product mixed with a liquified gas which is liberated from its container by expansion, no matter what the dimensions of the ejected particles are. Actually aerosol perfumes and cosmetics should deposit themselves immediately on the skin, the hair, etc., and should thus not have too fine particles; these are the wet spray aerosols.

The pressure in the aerosol receptacle remains approximately constant until it is empty. As the contents of the receptacle are expelled, the gas space is increased, which tends to cause a drop in pressure. But as soon as the pressure drops, more propellent changes to gaseous form, and the pressure is re-established.

It has been claimed that propellent aerosols appeared in the last century, because a certain Charlie Griebauher, in 1890 placed ethyl chloride in bottles fitted with valves; the ethyl chloride acted as its own propellent.

Without going into the question of such early priorities, we note that the kind of aerosols now manufactured is the direct result of research carried out during World War II by engineers of the United States Department of Agriculture (U.S. Patent No. 2,321,023). They developed a particularly efficient insecticide bomb, in which the propellent gas was dichlorodifluoro-methane, whose only use until then was in the refrigeration industry ("Freon" 12). The vapor pressure of this compound (about 70 pounds per square inch at 70° F.) produced a dispersion of particles of the correct dimensions; it was non-flammable and of low toxicity. During the War, 50 million insecticide bombs filled with "Freon" 12 were used.

After the war, American manufacturers decided to market this kind of aerosol, first for insecticides, then for deodorants, plastic coatings, etc., and finally for cosmetics.

Seeking to lower the cost price, they found that a moderate pressure, two or three atmospheres, was enough. This permitted lighter containers which, as well as being cheaper, were more aesthetic.

Thus was created a whole series of carbides having properties similar to those of "Freon" 12, but of different vapor pressures, making possible the right pressure for each application of aerosols.

These different propellents, which are available today in every country, under one name or another: "Freon", "Genetron", "CF 12 Electro", "Arcton", "Frigen", etc., are fluorine and chlorine derivatives of short chain

According to figures released by the Chemical Specialties Manufacturers Assn., U. S. and Canadian non-food aerosols for the year 1955 totaled about 240 million units with an estimated retail value of about $250 million.

By comparison, the production for Europe during 1955 has been estimated as 19,800,000 to 22,720,000 units, the leaders being England and Italy, followed by Germany and France. Various factors account for the differences. Maxime Néama in a recent article in Parfums, Cosmetiques Savons reported that the American buys ten times more aerosols than the Frenchman because: (1) the ingenuity of the American is reflected in aerosols in the most diverse markets, from insecticides to artificial snow; (2) the American manufacturer has priced his aerosol products for the masses; (3) he has launched them with successful advertising.

aliphatic hydrocarbons, especially methane and ethane.

We think it may be useful to list vapor pressure (absolute pressure) at 70° F. of the principal propellents:

Monchloro difluoro methane ("Freon" 22, "CF 22") 9.5 atm.

Dichloro difluoro methane ("Freon 12", "Arcton 6", "CF 12 Electro") 5.5 atm.

Dichloro tetrafluoro ethane ("Freon 114", "Arcton 33") 1.8 atm.

Dichloro monofluoro methane ("Freon 21") 1.5 atm.

Trichloro monofluor methane ("Freon 11", "CF 11", "Arcton 9") 0.9 atm.

Obtaining Intermediate Pressures

Intermediate pressures may be obtained by mixtures of these substances. Mixtures are sometimes furnished by the propellent manufacturer, with an indication of the pressure. But if the customer wishes to prepare his own mixture, he can easily calculate the approximate resulting vapor pressure.

For example, a mixture of "Freon 114" and "Freon 12" in the ratio of 60/40:

"Freon 114" - $C_2Cl_2F_4$ - molecular weight 171 - vapor pressure 1.8 atm.

"Freon 12" - CCl_2F_2 - molecular weight 121 - vapor pressure 5.5 atm.

100 pounds of mixture contain $60/171 = 0.3511$ mols of "Freon 114" and $40/121 = 0.3308$ mols of "Freon 12", making a total of 0.6819 mols of mixture.

The pressure of the mixture is:

$$\frac{(1.8 \text{ atm} \times 0.3511) + (5.5 \text{ atm} \times 0.3308)}{0.6819} = 3.5 \text{ atm.}$$

According to information furnished by Du Pont de Nemours, the pressures thus calculated are in general ten per cent below the pressures actually measured. This calculation is, of course, valid only in the case of "ideal solutions"; in certain cases the vapor pressure of the mixture is higher than the vapor pressure of each of its constituents, due to the formation of an azeotrope (as is the case of mixtures containing more than 50% "Freon 22").

The customer should also bear in mind that the pressure in the interior of the aerosol receptacle is not exactly given by the vapor pressure of the propellent used. This pressure is influenced by the air which may be introduced during filling or which exists in solution in the ingredients of the formula; the air increases the pressure. There is less risk of introducing air during cold filling because most of the air is displaced by the liquid substances added and by the dense vapor which evaporates from the Freon.

The pressure is also modified by the solvent which is always necessary in aerosol perfumes; the presence of miscible non-volatile liquids lowers the pressure.

Qualities of Propellents

Propellents are expected to possess a certain number of qualities. The products now on the market generally fulfill these conditions: they must be non-flammable (in the United States aerosols are submitted to non-flammability tests); in fact the propellent is non-flammable, but the alcohol in perfume products is combustible, and it would perhaps be wise to call the user's attention to this point in order to avoid any carelessness; propellents must also be non-explosive, non-irritating, have a low toxicity; they must be as odorless as possible (among the propellents that we have used, the most odoriferous seemed to us to be trichloro monofluoro methane). They must be non-corrosive to the materials of the receptacles and the valves with no risk of hydrolysis, which

would liberate hydrochloric and hydrofluoric acids. We will not dwell on this last point which, while most important for the cosmetics industry that is concerned with aqueous preparations containing detergents, is of less interest for the perfumer.

The ideal propellent must also be a good solvent. Actually these halogenated compounds, being generally non-polar, are good solvents for non-polar substances and poor solvents for the rest. Tables of products miscible or non-miscible with various propellents have been published, but the difficulty of partial or total insolubility may be avoided by the addition of a co-solvent, alcohol for example, in the perfume.

One of us, after very considerable experimentation, is in a position to state that he has never had to reject, for reasons of insolubility, any of the products that he has the habit of employing in his formulas.

The miscibility of propellents with water is very slight. But this does not prevent the preparation of aerosols from aqueous mixtures, the liquid phase being then heterogeneous. The difficulty exists for the cosmetician, but not for the perfumer. The latter has only to bear in mind that because of the insolubility of water in the propellents, the alcohol used as co-solvent must have a high enough degree (apart from questions of stability or corrosion).

The filling of aerosol containers is usually done by specialised firms. However, for the first laboratory trials it is feasible to put the perfumed alcohol solution in the receptacle; cool well to about $-70°F$; then add the liquified propellent at this temperature. It is then only necessary to apply the cover and screw in the valve.

Receptacles for aerosol perfumes are now almost always of glass, a material strong enough for the low pressures used (about 2 atmospheres), and better adapted than metals for aesthetic presentations. These bottles were not accepted until the end of 1953, at first with considerable misgiving, for fear of flying glass particles in case of breakage. But numerous experiments have shown that if the bottles are made of uniform glass, without sharp angles and loaded with a propellent of low vapor pressure, the risks are extremely slight. If the bottle is coated with a plastic covering, the danger is practically eliminated: The bottle is less easily broken because part of the shock of the fall is absorbed by the envelope; and if the bottle breaks, the envelope inflates like a little balloon, the gas escapes by little holes, and no glass fragments are scattered.

Aerosol Perfumes

With the availibility of glass bottles and a wide choice of propellents having practically no odor and low vapor pressures, the perfumer has in his possession all that is necessary to market his perfume in the new form of packaging while it still has all the attraction of novelty.

Has he fully exploited this possibility? (We speak here of the French perfumer only.) We do not think so. Does this mean, as it has been said, that "European industrialists are not in accord with the Americans for the use of these products (aerosols) in perfumery" (Gorokhoff, Ind. Parf., June 1955)?

Perhaps it is nothing but a prudent reserve—the wisdom of judicious technicians unwilling to launch a new kind of product on the market before it has been fully investigated and above all submitted to the most decisive test, that of time.

Thus we should not be too astonished to find at the moment a very small number of aerosol perfumes on the French market. We must, however, recognise that the creation of an aerosol perfume presents certain difficulties, which have been disclosed by different French and foreign authors. We will examine the various points

most often mentioned. We think that the experience of one of us in the preparation of these perfumes gives weight to our advice on these points.

Solubility

Certain indispensable perfumery ingredients are insoluble in the propellents; among them are the waxes, resins, glycols and various synthetic products. Lists of them have been assembled.

This difficulty is avoided by the use of alcohol as co-solvent. On the other hand the act of dispersing an alcoholic solution as an aerosol considerably increases its odorant power, so that the solutions used as aerosols may have a considerably lower concentration than classical solutions. We find, in different formulations:

Perfume 1: 95% alcohol: 9 Propellent 90

Perfume 2: 95% alcohol: 68 Propellent 30 (formula for a cologne)

Perfume 7: 95% alcohol: 58 Propellent 35

It will be seen that the concentration of perfume in the alcohol does not exceed 12.5%, and that the maximum final concentration is 7%. What is there left to say as to the concentration of each of the constituents of the perfume? At this low percentage is there any which would be actually insoluble?

It will have been noticed that the first formula contains a higher percentage of propellent than the two others, the latter giving wetter sprays; the first gives a spray more like an aerosol mist, but this is not always desirable in perfumery.

Necessity to use absolute alcohol

Often malodorous, this alcohol would not be easily accepted by perfumers. We have until now regularly employed 95-96% alcohol with satisfactory results.

The use of lower percentage alcohols is perhaps possible in certain cases, but there is risk of problems of solubility and perhaps of stability. We have not yet enough experience on this point.

Propellent odor in the first spray

In well-balanced perfumes we have never detected this odor, with the possible exception of trichloro monofluoro methane.

The most widely used propellents are dichloro tetrafluoro ethane ("Freon 114") and dichloro difluoro methane ("Freon 12").

Difference in olfactive stimulus

Victor DiGiacomo (Am. Perf., April 1955) made the correct observation that the olfactive stimulus produced by a perfume in the state of aerosol is not the same as that of the same perfume when smelled from a bottle or a blotter, because in the second case one can detect individual notes during the different stages of drying, whereas in pressurized perfume the dissemination is attained instantaneously. He adds that the perfume has a different note depending on the pressure at which it is vaporised.

We have ourselves observed this phenomenon for several years while studying the perfuming of air in theaters.

One could deduce pessimistically from this observation that it is impossible to transpose classical perfume formulas for use in aerosols.

But we have converted into aerosols various perfumes of our own formulation, also perfumes of well-known firms, and we are in a position *to state above all that the aerosol is an excellent test of stability, balance and behavior of a formula.* All the qualities and all the faults of a formula stand out with much more clarity, more relief, in an aerosol than in a classical solution. If a composition is flat, it becomes even more so in an aerosol. If a formula possesses a dominant note, deliberately introduced for the purpose of giving a marked character to the perfume, this dominant may become so strong in the aerosol that the rest of the perfume seems suppressed. A different percentage of this dominant will thus be necessary in order to re-establish the balance, and preserve the personality and character of the perfume.

But a well-constructed and well-balanced perfume may be used in an aerosol with a minimum of modifications of structure.

Deterioration of the perfume

We do not believe that deterioration is more frequent than in classical perfumes, but that it is likely to be detected more readily. We have been following the development, since a year ago, of a series of seventy-five samples selected among the most diverse formulas. During the whole time we have observed neither resinification nor coloration (except for a slight yellowing in a product containing indol), nor the appearance of acidity. We have observed, however, in several bottles, a slight "cooked" odor which appears only after six months, at first weakly, but which is today quite marked in two bottles.

The perfumes which have undergone this deterioration have in common a rather high proportion of eugenol or of vanillin. (There is no question of excluding these products, which have given excellent results in other compositions; it is perhaps solely their percentage in these formulas that is to blame). The perfumes in question were not composed specially for aerosols. On the other hand the faults of a formula detected at the moment of loading become more marked with age. In colognes where the fresh note of lemon or of bergamot were not clearly recognisable initially, this odor was completely lost after a few months.

An observation period is thus evidently necessary before an aerosol perfume is placed on the market. This observation should not be taken as a criticism because it is known that perfumers have always exposed their products to the test of time before submitting them to the judgment of the public.

Aerosol perfumes merit the same care.

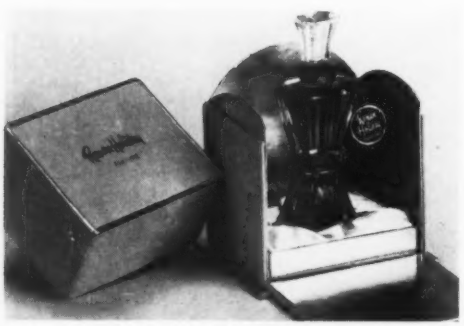
"Business before politics, I always say."

Packaging and Promotion

1.

1. GUERLAIN

Ode, a new perfume from the House of Guerlain, will be introduced throughout the country in October. Described as heady but not heavy, the new fragrance is packaged in a slender crystal amphora draped with frosted glass. The prices are $75 for 2 1/2 ounces; $40 for 1 1/3 ounce; and $22 for 2/3 ounce. A 1/4 ounce purse flacon will sell for $9.



2.

2. BOURJOIS

Bourjois is emphasizing its Roman Holiday series in its coming fall and holiday line. The perfume comes in a column-like bottle packaged in a pink carton. A recent addition to the line is a 3 ounce spray mist, and a Roman Holiday purse perfume dispenser is to be introduced in the near future. The perfume sells at $15 for 1 ounce. Also available in the fragrance are cologne and dusting powder.

3.

3. SHULTON

Shulton, Inc. has introduced its Thylox Medicated Shampoo as an addition to its Thylox Medicated Soap and Thylox Medicated Cream. The shampoo, formulated for the treatment of dandruff, itchy scalp, seborrheic dermatitis and oily scalp, is said to be the first medicated liquid shampoo made available without a doctor's prescription. It comes in a 6 1/4 ounce bottle, designed with indentations in the front and back for an easy grip, which retails for $1.50. The line is packaged in white with a rose-beige colored stripe on the box.

4. PRINCE MATCHABELLI

Abano Bath Oil from Prince Matchabelli, Inc., is now available in a pressurized form. The plastic-coated bottle is bell-shaped, coral red in color, and features white printing and a white crowned seahorse, the identifying symbol of all items in the Abano line. The box is beige with brown and coral red accents. The price is $2.50 for 3 1/2 ounces.

5. ROGER & GALLET

Roger & Gallet's original Eau de Cologne is being introduced in two new forms—friction pour le bain (after bath

4.

5.

6.

lotion and after shave lotion. The label for the products is based on the one long associated with the cologne. The after shave lotion is $2 for 8 ounces; the after bath lotion, $2 for 8 ounces, $3.50 for 16 ounces, and $6.50 for 32 ounces.

6. JEAN NATÉ

Jean Naté calls its new kit "Essentially Yours." Designed for the hospitalized or those on the go, it contains friction pour le bain in an 8 ounce plastic container; talc in a lightweight cardboard box; and a cake of soap in a protective plastic waterproof case. The kit itself is of chartreuse embossed plastic, with the all-over silk screened Jean Naté monogram in black. A full-length zipper permits easy access, a carrying handle adds to the convenience, and there's enough room for extras like a washcloth or tooth brush. The price is $4.50 plus 28c tax.

7. LENTHERIC

Tweed Soft Fragrance Shampoo is perfumed with Lentheric's Tweed fragrance. The new product comes in a bottle with long, modern lines, which is topped by a jewel-like amber-colored cap that matches the amber tone of the shampoo. Indentations in front and back make it easy to hold. The 7 ounce size is $1; the 4 1 2 ounce size 69c.

7.

8. COTY

Coty, Inc. has reintroduced its perfumed toilet soap. Three cakes come in a cellophane-wrapped box. It is available in four Coty fragrances: L'Origan, L'Aimant, "Paris," and Emeraude. The box retails for $1.50 plus tax.

8.

9. HELENA RUBINSTEIN

August 13 was the delivery date for Helena Rubinstein's new Medicated Beauty Treatment. The set, containing Deep Cleanser, a deep-pore liquid cream cleanser; Beauty Mask, to heal surface blemishes and refine skin texture; and Water Lily skin lotion, to tighten pores, is designed for skin-troubled persons. The kit contains material for 42 treatments; the price is $3.95 plus tax.

9.

I-Quiz

This Month's Quiz Master

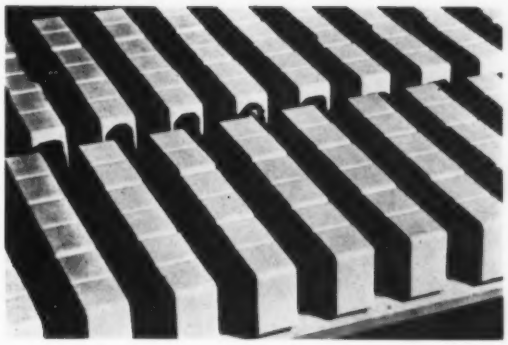
Veronica L. Conley, M.A., M.N.
Secretary, Committee on Cosmetics
of the American Medical Assn.

QUESTION I. *From the material which you have examined on the toxicity testing of cosmetics submitted for consideration, in the past, for the seal of acceptance and at present for permission to advertise in A.M.A. publications, did you find that most manufacturers' data were well organized and sufficiently complete?*

ANSWER. It is not usual for a manufacturer to initially supply sufficient scientifically acceptable data for a clear-cut decision on the probable safety of the product when distributed nationally. This does not always mean that the manufacturer has not had his product tested. In many instances the problem is that the report of the study which he submits is not sufficiently complete for evaluation. A manufacturer who contracts to have a toxicity study conducted should expect and require at the completion of that study, a complete report for the firm's permanent records. A sound scientific study to support the safety of a product is a form of long-term insurance. As such, the record of this study should be sufficiently complete and accurate to afford impartial evaluation. It should include at a minimum the name(s) of the investigator(s), the place where the study was conducted, a statement of the problem, the method of investigation, the number of subjects, the controls and the results. A statement on conclusions, unless accompanied by a complete description of the conditions of the testing, does not constitute scientifically sound evidence.

QUESTION II. *Under the seal acceptance program, were any products refused acceptance on the basis that common allergens were present?*

ANSWER. Lipsticks with eosin dyes, nail lacquers with the toluene sulfonamide formaldehyde resin and perfumes with oil of bergamot were not refused acceptance because their formulas included ingredients with a higher sensitizing potential than the average cosmetic ingredient. The number of reactions to these chemicals among the general population is not sufficiently high to contraindicate their use for the average person. It was not unusual, however, for consideration of a product to be discontinued because of inadequate evidence on the sensitizing potential of a new chemical in a formulation. Under such circumstances, the manufacturer was advised to have the finished product tested.



Sodium Tripolyphosphate

Actual properties of this soap additive

PAUL I. SMITH

THE soap manufacturer is sometimes puzzled to reconcile the conflicting claims made by suppliers of phosphates with the actual properties of these soap additives. It is, therefore, useful to examine the properties and applications of the most interesting of these, namely sodium tripolyphosphate or sodium triphosphate, and to see how it differs from the other members of the phosphate family. First of all it should be made quite clear that whereas sodium metaphosphate and sodium tetraphosphate are, chemically speaking, glasses, sodium tripolyphosphate and also the pyrophosphate are crystalline substances with clearly defined chemical properties. The outstanding difference between the tripolyphosphate and the simpler compounds, such as monosodium phosphate and disodium phosphate, etc., is that it softens water without precipitation and possesses marked and most unusual peptizing properties. In comparison with the glassy phosphates, namely sodium tetraphosphate and hexametaphosphate which also possess valuable sequestering ability, the tripolyphosphate gives better results for magnesium and iron, but a lower figure for calcium. It is claimed that soapers using tripolyphosphate in preference to the glassy phosphates enjoy important advantages which may be summarized as follows:

(1) Superior to the glassy phosphates in ability to sequester magnesium and iron.

(2) Economically attractive.

(3) Better able to adjust and buffer the pH of solutions.

(4) More stable to hydrolysis at elevated temperatures in the presence of free alkalies.

(5) More soluble in water than some of the other complex phosphates.

One very interesting fact emerges when the mechanism of sequesting with the phosphates is carefully examined. The complex phosphates, both glassy and crystalline, hydrolyze in aqueous solutions. Both hexametaphosphate and tetraphosphate form large quantities of trimetaphosphate and orthophosphate, which are devoid of any water softening properties. Together with a relatively small quantity of tripolyphosphate, the last named phosphate when present in solution hydrolyses to pyrophosphate and orthophosphate at a much slower rate and this makes it more efficient as a softener and sequesting agent.

Caustic in Flakes

ALTHOUGH many of the larger soapers buy their caustic in tankers, there are still a considerable number of the smaller manufacturers who find it more convenient to purchase caustic in the form of flakes. It is not still very widely known that soda producers are now able to standardise on flake size and shape and in the three grades usually made available: regular, fine and crystal flake; uniformity of size can almost be guaranteed. New flake-screening operations are now adopted by most progressive caustic manufacturers who also ensure, by scientific packaging, that the flakes do stay free and independent during storage in drums. On the face of it, this may all seem a rather trivial matter, but it is highly important as caustic made up of flakes of different sizes does not dissolve as easily and quickly as caustic made up of uniform flakes. Such considerations deserve evaluation.

Announcing

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SOAP SECTION

International Conference on Detergents Held in Paris

On June 15 the Comité Français de la Détergence held an international conference in Paris.

The committee, an outcome of the Ier Congres Mondial de la Détergence held in Paris in August 1954, studies the technical questions pertaining to detergents. The June conference allowed the delegates to exchange their points of view on related problems before the Second International Congress of Surface Activity, to be held in London in April, 1957.

A second conference is planned for this fall.

Washington State Court Says Lysol Label Okay

Lehn & Fink Products Corp., maker of Lysol Brand Disinfectant, has announced that a Washington State Superior Court decision has upheld the validity of its Lysol label, which does not use the word "poison." It was brought out in the course of the testimony that Lysol contains no poisonous substances named in any poison or pharmacy law of the state of Washington and is not a poison under any medically or scientificially recognized standard of toxicity.

Jet Bon Ami in Aerosol Form Being Introduced

United Dye & Chemical Corp., which bought controlling interest in Bon Ami Co. recently, is introducing Jet Bon Ami in an aerosol can.

Ogilvie Sisters Have Sale on Castile Shampoo

Ogilvie Sisters are placing their Castile Shampoo on sale during August, September and October. The 16 ounce size, which normally retails for $1.25 will be available at 98¢, and the 32 ounce size, which usually sells for $2.25, will be offered at $1.75.

Sayman Introduces Soap for Dry Skin

Sayman Products Co., manufacturer of Vegetable Wonder Soap for oily skin since 1877, has introduced a companion soap for dry skin. The new lanolated soap is packaged in a wrapper almost identical to that used for the oily skin soap. The product is being launched with a special introductory offer of twelve cakes for the price of nine, and is backed with a radio advertising campaign and point-of-sale promotion featuring store display cards, shelf talkers, and window streamers.

Elias D. Cohen, Starch Adhesive Pioneer, Dies

Elias D. Cohen, a vice president director and a member of the executive committee of National Starch Products, Inc., died on July 25 at the age of 74. A pioneer in the packaging industry, his part in the introduction of starch adhesives which made possible the use of automatic machinery, was instrumental in the birth of the present packaging era.

ICC to Hear Plea for Lower Shampoo Freight Rate

With contributions from shampoo companies approaching the amount required to finance the cost of litigation, the Interstate Commerce Commission is to hear a plea for a lower shampoo freight. Counsel for the shampoo group, Robert De Kroyft, has drafted a complaint to be filed, and is awaiting consent from firms comprising the group to be listed as complainants. Edward J. Breck, chairman, Shampoo Manufacturers Freight Group, urges all shampoo companies to cooperate in the case by furnishing information requested by Mr. De Kroyft for use as evidence in the proceedings.

Breck Enlarges N. Y. Sales Office

The New York sales office of John H. Breck, Inc., and the beauty salon, housed in the same building at 5 East 57th St., are being enlarged. Additional space on the seventh floor will be occupied by the sales office, its former space on the ninth floor going to the beauty salon.

P&G, Monsanto Chemical Co. Cited as Well Managed Firms

Procter & Gamble Co., Cincinnati, and Monsanto Chemical Co., St. Louis, are among the most highly rated of 409 companies cited for outstanding management performances in the 1956 edition of the "Manual of Excellent Management." The 409 firms were selected from 4000 American and Canadian companies surveyed by the American Institute of Management.

Procter & Gamble is praised for its economic function and research development operation, for the soundness of its internal procedures and lines of communications, and for the growth, stability and potential of its earnings.

Monsanto's growth, reputation, contribution to the national economy, and carefully planned and fruitful research activities are commended.

SOAP NOTES

A private label detergent is to be marketed by the National Appliance & Radio-TV Dealers Assn. It is called Wash Well and is offered in two types: low sudsing and general purpose. The principal reason for the association's entry into the detergent field is that Monsanto's "All" detergent was transferred from distribution almost exclusively through appliance stores to other channels.

A throw-away tooth brush equipped with enough toothpaste for one brushing has been launched by Denta Fresh, Inc. The brush, which has a sponge head attached to a plastic handle, retails for five cents.

A new heavy liquid laundry detergent is being laboratory tested by Colgate-Palmolive Co. The new product is called "Spree" and will be competitive with Lever Bros. Co.'s "Wisk," now nationally distributed and Procter & Gamble Co.'s "Biz" now in several test markets.

Sodium N-Lauroyl Sarcosinate reduces dental caries activity materially if incorporated in a dentifrice, according to a two year study of 1,159 young adults in four different areas, reports Dr. L. S. Fosdick of the Dental School of Northwestern University.

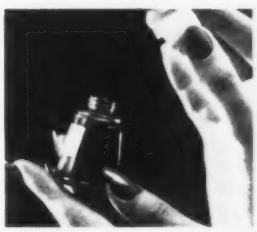
Two products from Rayette, Inc., which were introduced this month are Roil Premium Shampoo, which is said to combine four individual cleansing agents to remove every type soil from the hair; and "DreamColor Rinse," a temporary hair coloring formula combining creme base with cationic action. The latter, presented in three shades of gray, will soon be available in many other colors.

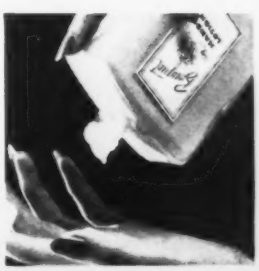
B. T. Babbitt is launching a test campaign in southeast markets with a "10¢ off" promotion for Glim liquid detergent in a new plastic squeeze container.

American Alcolac Corp., through a new manufacturing process, is producing a new type of sodium lauryl sulfate powder. Tradenamed Sipex OP, it is a dry, white powder of high active content.

Lustre-Creme shampoo, product of the Kay Daumit division of Colgate-Palmolive Co., will be advertised with a $35,000 Sweepstakes contest this fall. Awards will be based on the ability of the contestant to pick leading movie stars as determined by the annual Fame Poll.

Beauty is an All-Day Problem





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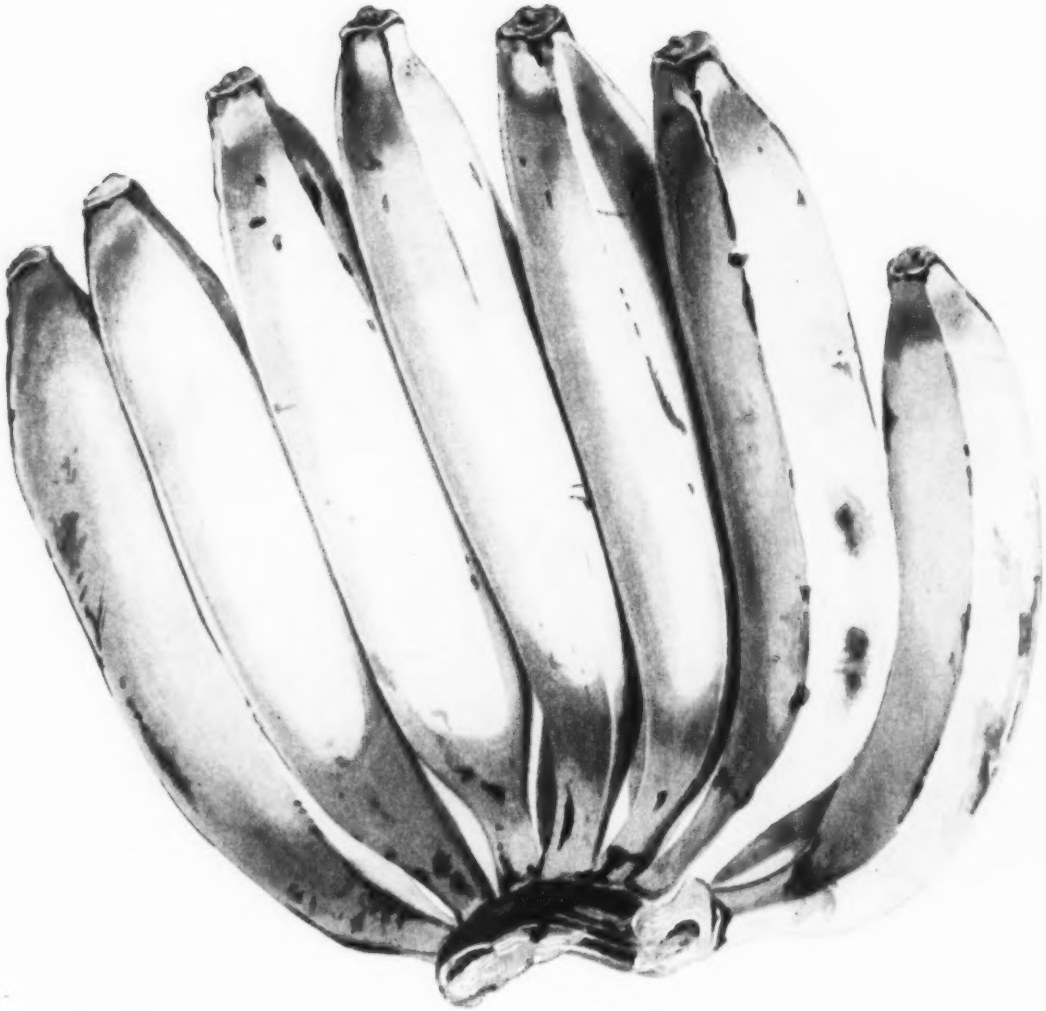

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Citrus Oils *Citrus Pastes* *Clear Alcoholic Flavours* *Hydrosol Flavours* *Citrus Crushes*

Photo courtesy The Borden Co.

NATURAL STRAWBERRY FLAVOR COMPONENTS

The work of three principal groups of investigators has shown that over 34 compounds or groups of compounds may be present in natural strawberry flavor

MORRIS B. JACOBS, PH.D.

THERE are a number of imitation and artificial strawberry flavors on the market. These as is probably true of most things vary from the excellent to the mediocre. Great strides have, indeed, been taken over the crude imitations that were available over fifty years ago. Present day artificial strawberry flavors are a far cry from the simple and unrealistic flavor essences mentioned in the first edition of Beilstein's *Handbuch der Organischen Chemie* published in 1881 in which only three components are listed, namely, ethyl acetate, ethyl butyrate, and isoamyl acetate.

With the synthesis of ethyl methylphenylglycidate by Darzens in 1904, a considerable step forward in the formulation of imitation strawberry flavors was taken for this compound. Though not found in nature, it did have a strawberry odor and flavor which served more or less adequately. Darzens originally described this compound as being a weak fruity smelling liquid.

In the formulation of any flavor, reliance is sometimes placed on including compounds which are deemed normally to be present in the essence of the fruit. Sometimes this is of no avail for the flavor chemist in reporting results of an investigation or analysis of natural fruit essences or flavors is generally reporting end results. The compounds found may actually be present as components of the original natural flavor mixture or they may be present because they were constituents of components of the flavor essence mixture. Often this is difficult to determine though more modern methods of analysis are enabling the chemist to separate such mixtures by less drastic treatment, for instance by using chromatographic methods of separation instead of distillation methods of separation.

Natural Components

Among the more important work on the compounds found in natural strawberry flavor is that of Coppens and Hoejenbos, McGlumphy, and more recently Dimick and co-workers. A. Coppens and L. Hoejenbos in their paper on the volatile constituents of strawberry juice which was published in *Rec. trav. chim. Pays Bas 58*, 680 (1939) mentioned the following components: Ethyl alcohol; Ethyl acetate; Acetic acid; Ester of formic acid; Amyl alcohol, free and esterified; *n*-Butyric acid, probably present as the ethyl ester; Caproic acid, as the ethyl or methyl ester; Ester of benzoic acid; Cinnamic acid; Ethyl salicylate; Caproic alcohol (*n*-hexanol); alpha-Terpineol; Terpine hydrate; Borneol, free or esterified; Ketone, $C_{10}H_{18}O_2$ (semicarbazone melting at 173.5-5.5

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deg. C.); Saturated acid, $C_{15}H_{30}O_2$ (possibly lanostearic acid).

In addition to the above mentioned compounds and their derivatives, Coppens and Hoejenbos concluded that other compounds were also present, namely: Biacetyl; Phenethyl alcohol (phenylethyl alcohol); acetone; Caprylic acid (*n*-octanoic acid); Coumarin; *dl*-Isofenchyl alcohol; with some evidence indicating the presence of Acetyl methyl carbinol; Acraldehyde; Acrylic acid; Benzaldehyde; Acetophenone.

It should be noted that these investigators used the juice of *Fragaria elatior* Ehrh. for their investigations.

McGlumphy, in discussing the work of his laboratory on fruit flavors in an article published in *Food Technol.*, *5*, 353 (1951), stated that he and his collaborators were able to confirm the presence of acetic acid, acetophenone, biacetyl, and cinnamic acid in the juice of strawberries. They also found evidence which indicated that *n*-butyraldehyde, *cis*-terpinol hydrate, and probably ethyl acetoacetate were present too. A high molecular weight aldehyde or ketone was also isolated by this group of investigators.

Recent Work

K. P. Dimick and B. Makower, of the Western Utilization Research Branch, Agricultural Research Service, U. S. Department of Agriculture, at Albany, California, began a systematic study of the identities and amounts of the volatile flavoring components in strawberries. Their first report on the volatile flavor of strawberry essence concerned the identification of the carbonyl compounds and certain low-boiling substances present in the essense. They found in aqueous distillates of Marshall strawberry puree that acetaldehyde, acetone, biacetyl, ethyl alcohol, 2-hexenal, methyl alcohol, and esters of acetic and *n*-butyric acid were present. Additional distillation of the aqueous essence gave these investigators a fraction comprising about 13 per cent of the original essence which contained about one-third free fatty acids, principally, acetic, *n*-butyric, isobutyric, *n*-valeric, and *n*-caproic acids. They noted that the remainder of the oil fraction, though amounting to only about 7.5 parts per million of the fruit, had such a powerful flavor intensity that the aroma of strawberry was clearly recognizable in a concentration of the order of 0.1 part per million. On the other hand the fatty acids in distilled water in concentrations of the order in which they were found in the original fruit could not be detected by taste.

In this connection, it is of interest to point out that Dimick and Makower noted that different varieties of strawberries vary in the intensity of their flavor. For instance they found, (the numbers representing flavor intensity) that the following varieties varied as Britemore 455, Sovereign 472, Marshall 600, Red Heart 880, Corvallis 1104, President 1300, and Ettersburg 2200. They stressed that the total amount of organic volatile matter was not a measure of the flavor strength of strawberries nor was there any relationship between the carbonyl content and the flavor intensity.

They found only a trace of 2-hexenal (leaf aldehyde) in samples of the varieties noted in the preceding paragraph for the 1948 season with the exception of the Marshall variety which contained 0.038 part per million in the puree made from the frozen fruit but they also noted that the concentration of this aldehyde was much greater in the unfrozen fruit reaching concentrations of the order of 7 parts per million. They surmised that the 2-hexenal is produced enzymically so that when the enxymic action is inhibited by freezing or by heating little of the aldehyde is produced by the fruit.

The aforementioned work of Dimick and Makower was reported in *Food Technol.*, *10*, 73 (1956). At the 129th national meeting of the American Chemical Society which was held in Dallas during April, Dimick, Stitt, and Corse reported on a second phase of their investigations of the volatile flavor of strawberries. In this part of their work they used vapor phase chromatography and found that the first three fractions contained isoamyl alcohol, *trans*-2-hexene-1-ol, *n*-hexanol (*n*-hexyl alcohol), *trans*-2-hexene-1-yl acetate, and ethyl caproate. These components comprised approximately 90 per cent of the entire flavor material. One can recall here that Dimick and Makower found that the typical strawberry aroma appeared to reside in the oil fraction and amounted to approximately 7 per cent of the total essence.

Strawberry Leaves

In such a review of the literature concerning the companies of strawberry flavor, it is appropriate to mention the work of H. Franzen and A. Wagner on the chemical components of green plants. In their second paper on the presence of a mixture of unsaturated alcohols found in green plants published in *Sitzb. Heidelberg Akad. Wiss. Math. Nat. Klasse, Abt., 1920*, 4 (*Chem. Abstracts*, *15*, 1554 (1921)), they reported that they found unsaturated alcohols were often present in green leaves, particularly strawberry leaves. They obtained a distillate which yielded a component that had an intense odor of lemons and they concluded that this substance was probably citral.

Volatile Essence Recovery

While this article is primarily concerned with the substances that have been found as components of strawberry flavor essences obtained from sources, one cannot fail to mention the work done by the Eastern Regional Research Laboratory, presently the Eastern Utilization Research Branch, Agricultural Research Service, U. S. Department of Agriculture at Philadelphia, Pa. on the recovery of the volatile portion of strawberry flavor. This work was originally designed for the recovery of apple essence and was extended to recovering the flavor essences of other fruits.

In this work which was described by H. P. Milleville and R. H. Eskew in U. S. Dept. Agr. Bull AIC 63 (1944); Supplements Apr. 1945 and Jan. 1947; by E. L. Griffen and Davis, N. H. Eisenhardt and M. E. Heller in *Foods Inds. 21*, 1545 (1949); and in R. P. Homiller and N. H. Eisenhardt, U. S. Patent 2,572,846, Oct. 1951, 108-fold and 89-fold concentrations of strawberry essences were prepared. These flavoring essences were however, somewhat weaker in aroma than the theoretical

concentration. The character of the aroma was also lighter than the aroma of the fresh juice. It is to be noted also that these investigators claimed that the resultant product was largely composed of the "top note" of fresh strawberries though actually substandard fruit was used in the preparation of the essences.

It is clear from the foregoing that a relatively large number of substances are present in natural strawberry essence and that the relative proportion of these substances in strawberry fruit essence varies in accordance with the conditions under which the fruit is grown and treated. Over thirty four compounds or groups of compounds appear, from the work of these investigators, to be present in strawberry flavor. It is clear that this makes the duplication of a natural strawberry flavor an interesting and difficult problem.

As mentioned in the beginning of this paper, it was noted that there are a number of powerful flavoring substances that are used in the preparation of imitation and artificial strawberry essences. The most common of these are the phenylglycidates, that is, the so-called strawberry aldehydes but many substances are employed and many more have been suggested as possible components. In my book, *Synthetic Food Adjuncts* I list 26 substances which the literature indicates are among the more common components of imitation strawberry flavors and in addition 53 other flavoring substances that have been suggested or employed for the formulation of strawberry essences and oils.

In a subsequent article the components of imitation and artificial strawberry flavors will be discussed and some representative formulations will be considered.

Import of Vanilla and Tonka Beans

THE U. S. Department of Commerce has released monthly statistical data on the importation of vanilla beans and tonka beans during the year 1955 and the first three months of 1956 into this country. The compilation sets forth the pounds, dollar value and country of origin.

VANILLA BEANS

JANUARY 1955

Mexico	23,054 pounds	$208,760
Indonesia	3,351	15,863
French Pacific Islands	3,880	34,083
Seychel	1,830	16,600
Madagascar	43,586	372,646
TOTAL	75,701	$647,952

FEBRUARY 1955

Mexico	14,243 pounds	$116,517
French Pacific Islands	8,352	73,573
Madagascar	71,855	657,637
Other countries	1,031	4,786
TOTAL	95,481	$852,513

MARCH, 1955

Mexico	7,347 pounds	$ 69,588
French Pacific Islands	7,361	59,889
Madagascar	28,883	248,446
TOTAL	43,591	$377,923

APRIL 1955

Mexico	7,062 pounds	$ 66,500
French Pacific Islands	13,110	112,357
Madagascar	35,563	307,024
TOTAL	55,735	$485,881

MAY 1955

Mexico	51,336 pounds	$452,143
Windward Islands	1,500	12,047
French Pacific Islands	3,727	24,666
Madagascar	15,878	124,360
Other countries	649	2,922
TOTAL	73,090	$616,138

JUNE 1955

Mexico	4,187 pounds	$ 35,394
Dominican Republic	5,271	42,100
French Pacific Islands	10,301	64,892
Madagascar	57,572	405,746
Other countries	767	4,616
TOTAL	78,098	$552,748

JULY 1955

Mexico	7,501 pounds	$ 56,254
French Pacific Islands	4,667	26,618
Madagascar	23,233	173,250
Other countries	2,176	10,533
TOTAL	37,577	$266,655

AUGUST 1955

Mexico	11,500 pounds	$ 83,287
French Pacific Islands	2,999	16,313
Madagascar	84,421	513,776
Other countries	771	3,523
TOTAL	99,691	$616,899

SEPTEMBER 1955

Madagascar	39,307 pounds	$225,990
Other countries	3,557	8,588
TOTAL	42,864	$234,578

OCTOBER 1955		
Mexico	38,409 pounds	$398,514
French Pacific Islands	12,839	45,144
Madagascar	28,899	172,083
Other countries	737	3,317
TOTAL	80,884	$619,058

NOVEMBER 1955		
Mexico	12,100 pounds	$ 74,670
French Pacific Islands	6,881	24,660
Madagascar	39,762	212,433
Other countries	320	840
TOTAL	59,063	$312,603

DECEMBER 1955		
Mexico	32,938 pounds	$262,671
Madagascar	177,403	955,354
Indonesia	2,865	13,032
TOTAL	213,206	$1,231,057

JANUARY 1956		
Mexico	11,544 pounds	$ 80,811
French West Indies	3,036	19,240
French Pacific Islands	4,805	20,640
Madagascar	57,637	292,874
Other countries	854	3,422
TOTAL	77,856	$416,987

FEBRUARY 1956		
French Pacific Islands	5,272 pounds	$ 20,220
Madagascar	75,035	338,256
Other countries	2,647	1,442
TOTAL	82,954	$359,918

MARCH 1956		
Mexico	2,118 pounds	$ 10,380
French Pacific Islands	6,632	22,905
Madagascar	92,588	478,787
Other countries	2,425	9,717
TOTAL	103,763	$521,789

TONKA BEANS

JANUARY 1955		
Trinidad	81,521 pounds	$ 67,662
Venezuela	21,894	18,205
Other countries	3,086	1,604
TOTAL	106,501	$ 87,471

FEBRUARY 1955		
Trinidad	43,626 pounds	$ 26,479
Other countries	4,704	3,529
TOTAL	48,330	$ 30,008

MARCH 1955		
Venezuela	34,520 pounds	$ 30,777
Other countries	10,058	7,495
TOTAL	44,578	$ 38,272

APRIL 1955		
Other countries	1,140 pounds	$ 570
TOTAL	1,140	$ 570

MAY 1955		
Venezuela	20,584 pounds	$ 18,605
Other countries	8,682	6,518
TOTAL	29,266	$ 25,123

JUNE 1955		
Venezuela	16,900 pounds	$ 18,734
Other countries	6,097	4,631
TOTAL	22,997	$ 23,365

JULY 1955

No imports for the month of July.

AUGUST 1955		
Trinidad	17,954 pounds	$ 14,285
Venezuela	344,748	222,674
TOTAL	362,702	$236,959

SEPTEMBER 1955		
Venezuela	33,518	$ 37,155
Other countries	11,964	9,204
TOTAL	45,482	$ 46,359

OCTOBER 1955		
Other countries	6,128 pounds	$ 3,699
TOTAL	6,128	$ 3,699

NOVEMBER 1955		
Venezuela	17,255 pounds	$ 19,127
Other countries	9,716	7,183
TOTAL	26,971	$ 26,310

DECEMBER 1955		
Other countries	4,725 pounds	$ 2,818
TOTAL	4,725	$ 2,818

JANUARY 1956		
Trinidad	34,507 pounds	$ 31,337
TOTAL	34,507	$ 31,337

FEBRUARY 1956		
Other countries	19,631 pounds	$ 14,826
TOTAL	19,631	$ 14,826

MARCH 1956		
Other countries	10,576 pounds	$ 7,411
TOTAL	10,576	$ 7,411

STEFFEN ARCTANDER

JOURNEY TO

Antalaha — Capital of Vanilla

Photos courtesy the author and Bernard L. Lewis, Inc.

Above: A picker gathers the vanilla crop. Right: A native brings the harvested beans to the market.

PART II

SHORTLY after fertilization the ovary of the vanilla flower expands considerably, and a month or so later, the pod has reached full size. This does not mean, however, that it is ready for harvesting, which takes place when the pod becomes slightly yellow at the lower end (the end opposite the peduncle). At this stage the pod is far from physiological maturity, which is attained only when the pods open also from the lower end (this opening-up is called the dehiscense); but the yellow colour means "technical ripeness," and the pod is harvested. The pod when green or yellow has no flavour at all, in fact it is actually poisonous, mainly because of one or more glycosides, which have to be destroyed by enzymatic effect—oxidation as well as hydrolysis. The necessary enzyme is present in the pod, but in cells separated from those containing glycosides.

Producing the Vanilla Flavour

Now follows one of the most important stages of the vanilla preparation: to help nature produce the well-known and highly estimated vanilla flavour. In Madagascar and Réunion the method in use is the "échaudage," which means placing the pods (in baskets) into hot water, in most cases about 70° C. (158° F.) either for 15-20 seconds, or for a few seconds repeated several times at short intervals. Before this dipping, a sorting has taken place, called the first "triage" according to the general aspect of the pods.

Then, still wet and hot, the pods are placed in cases which are closed and covered overnight. Enzymatic splitting of the glycoside can now take place, and the poisonous glycoside is quantitatively converted into aromatic compounds, among which vanillin is the best known, and into harmless monosaccharides.

The third step in the preparation is the "étuvage," sweating the pods after exposure to the sun. This stage takes quite a lot of time as it is repeated several times, both outside in the daytime and indoors at night. At certain hours, preferably between 11 a.m. and 2 p.m., the pods are exposed to the sun on large areas of bamboo trays in the open (in Réunion on platforms of beach roller-stones). In the early afternoon the pods are wrapped in covers and placed into boxes. This stage, taking place on the 2nd, 3rd, 4th and 5th days is called the "soleilage" and is followed by another "triage," sorting and treatment on trays for drying in the sun. Here, the "classement," or classification takes place. The pods are sorted into 4 classes: grosses (large, or rather thick pods); demi grosses; avancées (advanced stage of drying); demi séches (half-dry pods). They are classified as 1st, 2nd, 3rd, 4th and 1st split, 2nd split, 3rd split, 4th split, the latter being split at the lower end. For extraction use, this is no disadvantage at all except that they do not exhibit themselves as neatly as the "closed" pods.

The next stage of the preparation is the "mesurage," the length measuring of the pods, which have now become their much appreciated chocolate-brown, dark colour, and are emitting their delicious perfume, perceptible at a great distance from a house of vanilla preparation. According to length of pods, they are

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Drying vanillo beans on bamboo trays.

The échaudage, or dipping the vanilla beans into boiling water.

sorted by hand as 22-21-20-19-18½-18-17½-17- and so on, in centimeters.

Before being exported, the pods have to be wrapped, and this too has its particular process. It is done according to special standards. The wrappers are tied in the middle only in Madagascar, while in Mexico, second largest supplier to the United States, they are tied at both ends and in the middle. In Tahiti, second largest world producer, which grows a different variety of vanilla, the wrappers are tied at both ends. Guadeloupe, a tiny French island in the West Indies, produces vanilla but the pods are shorter, much wider and weigh from 2 to 4 times as much as the Bourbon type vanilla pods. The Guadeloupe vanilla is dispatched loose, "en vrac."

The wrapped vanilla is placed in tin boxes, lined with several sheets of wax paper in order to produce a constant percentage of humidity in the box during the transport. The boxes are made locally. Tin plate is brought in by air, and native workers make the boxes by hand and hammer. These boxes contain 7-7½-8 kilos of prepared vanilla and are dispatched 6 tin boxes in a strong wooden export case. The quality "en vrac", not wrapped into bundles, is only 3-4 kilos in a tin box.

Quality of Vanilla

The quality of the vanilla depends largely on how well all these different operations are carried out. Some planters or preparators, long established in Madagascar, jealously keep the secrets of their processes, which have been handed to them by their fathers. Their produce contributes greatly to the fine reputation of Madagascar vanilla in all parts of the world.

As earlier mentioned, 3 to 4 parts of green vanilla pods are required to make one pound of chocolate-brown, prepared vanilla. There is, however, during the recent years, a growing tendency among large customers, notably those making vanilla extracts, to buy a very dry product. To dry out effectively the pods in this extremely damp region would be well-nigh impossible. Science has aided at this point, and infra-red rays are used for the last drying process.

Following experiments carried out at Ivoloina and still in progress at the research base near Antalaha, vanilla pods are now cut into half-inch or third-inch bits, then dried quickly under infra-red light (tubular lamps). This does not at all diminish the fine fragrance or perfume of the prepared pod, which will keep its aroma for years on end. Like well-aged whole pods, the infra-dried pieces exhibit nice crystals of vanillin. The lower weight per "aroma-unit" will save a considerable amount in freight, and the process increases the yield of extract. Partly because of the improved keeping qualities, these extra dry cuts can be sold at almost the same price as whole pods containing from 30 to 70 per cent of water.

Diseases of Vanilla Plants

Vanilla plants may be subject to cryptogamic diseases attacking the tissues, the fruits themselves or even the roots. The state research station of agriculture at Ivoloina, the vanilla research study station near Antalaha and the Institut Pasteur at Tananarive (capital of Madagascar) are all studying these problems, and are carrying out numerous experiments on the treatment of the vanilla plant to prevent diseases.

By seeding out single seeds—there are about 25,000 in one vanilla pod—tending and treating the seed-like isolated bacteriae, the research stations have succeeded in proving that the vanilla plant is a hybrid. The same pod produces seeds, which isolated may give quite different vanilla plants. Inversely, the vanilla plant in use has been "produced" by crossing certain wild vanilla plants.

Fertilization by motor-spray is still on its experimental stage, but has recently been carried out on the research station near Antalaha. The treated vanilla plants, sprayed with a chemical agent, actually produced some pods, but so far it has been impossible to produce the characteristic vanilla-flavour in the pods after the conventional preparation. Mother Nature takes her revenge, when we disturb her order, and until now man has been unable to fool her as far as vanilla is concerned.

At present there are the following possible "qualities" of vanilla:

"Première" or first quality: whole unsplit pods, flexible, full, sound, with a good aroma, a uniform chocolate-brown colour and small spots.

"Deuxièmes fendues": second split quality; same quality, but split.

Third quality: whole, unsplit pods, flexible and dried, chocolate-brown or reddish, sound, good aroma, spots accepted.

"Troisièmes fendues": third split; same quality, but split.

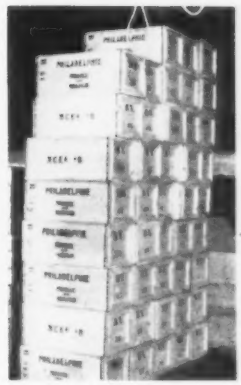
"Quatrièmes" or fourth quality: short pods, flexible or dried, and pods with the ends broken or cut, sound, with good aroma.

"En vrac" or fifth, or loose quality; thoroughly dried pods, woody, ends cut or broken, normal aroma. Marks are accepted for all qualities without pricing down.

The annual world consumption of vanilla lies in the neighborhood of 1,000 tons. The annual production is subject to heavy fluctuations on the market, crops being

Hand sorting the beans according to length.

Wrapped pods tied in bundles for packing.



Cases in Antalaha wait for export.

from 350 to 1,200 tons of prepared Madagascar vanilla a year during the last 10 years. 1948 was especially "bumper crop," but owing to an increasing demand, even the latest years of lower crops have given almost the same or better value on export. The United States has, however, during and since the Second World War, used increasing amounts of vanillin and related synthetic vanilla aromatics, which necessitated repeated advertising campaigns to push the sale of natural vanilla. To the connoisseur the synthetic products are, however, no severe threat to an extract made from natural vanilla, and Madagascar vanilla can obviously look forward to a steady and even upward trend in the market, not only in the U. S., but in most countries of the world. Yet it remains worthwhile remembering that the U. S. still consumes about 50% of the total world production of vanilla.

The record output of prepared vanilla exported was more than 1200 tons in 1950. Of this quantity more than 1,000 tons were shipped from Antalaha, although only a small part, about 100 tons, came from Antalaha itself. About 400 tons came from Andapa, and the remainder from the river districts between.

American customers prefer the so-called "quatrièmes sèches," the dry fourth quality, and this is now in such heavy demand that it brings even higher prices than 20-22 cms. first quality pods. This is worthwhile noticing, as it gives another proof that the classification in "qualities" does not refer directly to the aromatic and technical advantages of the vanilla. The best aspect allows for naming a higher quality, and indirectly this may mean a raw material which gives good products and extracts too. But if the vanilla is to be used for its aromatic qualities above its good aspect, the decision of a purchase calls for thorough investigation of all qualities and their virtues, and most often the very dry fourth quality is best as far as extract yield is concerned.

The FDA of the United States demands a certain standard for all products sold under the name "vanilla extract." Such products must contain the soluble matter from one part of natural vanilla for each ten parts of extracts." So far no satisfactory method of analysis has been worked out to protect this standard from being neglected, and statistics show that the amount of vanilla extract sold in the U. S. largely surpasses ten times the total import of vanilla pods into the States. A combination of chromatographic and infra-spectro-photometric analysis seems promising, but the method has not yet been perfected.

As the market prices per weight unit of dry, half-dry or soft vanilla pods are almost identical—in some cases the dry ones are even cheaper—it is obvious that buying the dry quality gives much more aroma for the same amount of money. When cut and completely dried vanilla pods become a common, commercially available article, this quality will probably be the one in most demand. Its yield of extract is the highest, and its keeping qualities are far better than those of normal, whole and half-dry pods. The U. S. and Germany among other countries now buy the extra dry, whole pods, while England, Sweden and many others still demand the "soft," "old" quality vanilla pod. It seems likely, however, that the housewives will learn not to buy water, but will demand 50% more aroma for the same amount of money.

The vanilla pod is a fruit, and the producers want to sell it as a fruit. According to local point-of-view, the best quality is 1st, 2nd or 3rd quality split vanilla, aged for about 8 months. Beyond the aging of 12 months the vanilla pods do not gain any more in aroma, but begin to lose. At Antalaha Bourbon vanilla from Réunion was considered top quality; next comes Antalaha vanilla, and then the Comoro vanilla. The latter could be of excellent quality, were it not subject to severe drawbacks caused by thefts. In order to prevent too much loss, the Comoro planters harvest their pods at a too early stage, and consequently the pods do not obtain the proper colour and aroma during the preparation.

In Antalaha house after house is occupied with vanilla preparation. In town itself no vanilla is grown, except for fun as we grow hollyhock, vines or caprifolium; but a few miles outside town vanilla groves are quite common.

Marketing of Vanilla

When vanilla is purchased, the deal is generally made with the man who tends the preparation of the pods, and not with "pure" wholesalers. Years ago, the vanilla went from the plantation to a bulk dealer; then to preparation; from there to the export wholesale dealer. In the country of arrival, too, many links formed a price-increasing chain to the customer who used the vanilla. This system has now been simplified: the planter himself is rarely a wholesaler, but he may be the preparator. Some planters however are not able to take up this almost endless job, which demands large areas and buildings not too far from habitation. So specialists in vanilla preparation have grown up, and the existence of such houses can only be greeted with applause. Thus only two links remain: the planter, and the preparator, who also handles the sale and export of the prepared vanilla. The latter, the exporter, is a stockist and is largely dependent upon market fluctuations; while the former, the planter, is exposed to the caprices of Mother Nature.

New PRODUCTS & IDEAS

VACUUM POT STILL—1

The Arthur F. Smith Co. has developed a new type high vacuum pot still which is said to be the first of its kind to utilize direct agitation of the distilland. Known as the ASCO Model P, the manufacturer claims that the still is capable of limited fractionation of organic materials up to a molecular weight of 700, with results superior to that of conventional distillation equipment. The construction features an all-glass column, and a distilland capacity of up to two liters with an output of one liter per hour. Vacuum range is as high as .1 micron Hg., with a temperature range up to 300 degrees C. or higher.

PHOTO-ELECTRIC CONTROL—2

The Ripley Company, Inc., manufactures a photo-electric control unit, the PE-150. The machine is simply plugged in like a lamp, and is said to be a reliable and inexpensive control for many applications. The light source unit directs the light beam into a photo-electric tube. Any object may be made to cut off the beam, and properly placed controls can separate objects according to height. Reflected light may be used to identify light and dark objects. The contacts control 10 amperes at 110 volts AC, 60 cycle, enough current to operate counters, magnetic relays, solenoids, and many other magnetic devices.

BOTTLE FILLER—3

A piston filling machine that handles from 2 ounce to quart containers and fills semi-liquids and semi-solids is offered by the Filler Machine Co., Inc. Speed of fill is from 60 to 88 containers per minute, with higher speeds available. Accessories such as agitator, unscrambler and cleaner are available. The valve mechanism on the machine is said to be made so that it can be dismantled, cleaned and reassembled quickly. The unit is a straight line filler which will not fill unless containers are under the nozzle. The bottom-up method of filling is said to eliminate air pockets and to insure a completely solid pack. All contact parts and parts around the filling zone are made of stainless metal.

WATER ANALYZER

Manufacturers Engineering & Equipment Corp. produces the new Du Pont Model W Electrolytic Water Analyzer for the measurement of small quantities of water in gas streams. This instrument is said to permit instantaneous and accurate measurement of water content down to less than one part per million. Measured output is available for recording with standard recorders. The instrument operates by passing the wet stream at a regulated rate over a hygroscopic substance electrically conductive only when wet, and absorbing all of the water in this substance. This permits complete quantitative electrolysis, and the water content is determined as a function of the electrical current in accord with the basic laws of electrolysis. Provisions are made for rapid flushing of lines to minimize start-up time delay. Generally an accuracy of better than one part per million is claimed to be achieved within two to three minutes.

SEALING MACHINES

Popper & Sons, Inc., offers two hand operated aluminum sealing machines which handle the range of seals from 11 mm. to 43 mm. They operate by spinning the aluminum closures of vials and bottles of all diameters from 1 cc. to 1 liter. The Economy Model CMD features a standard base and motor drive. The De-Luxe Model CM 15 has features designed to provide ease of adjustment. Operator safety is assured with the aid of a shield covering the spinning rollers.

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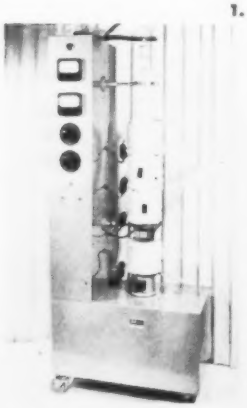

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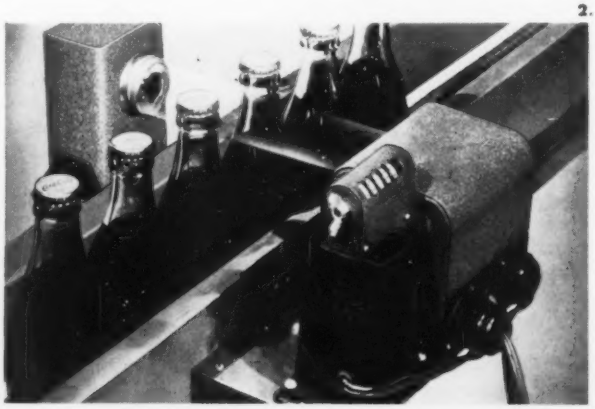

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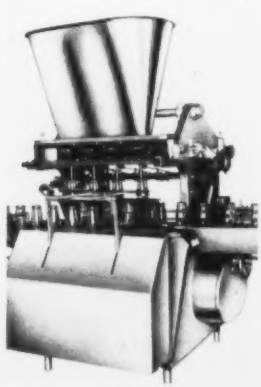

Two of the vacuum units used in our Clifton Fruit Concentrates Department.

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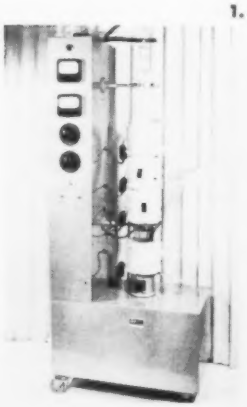

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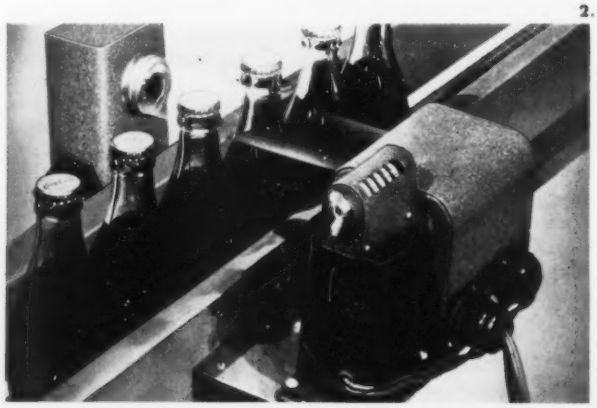

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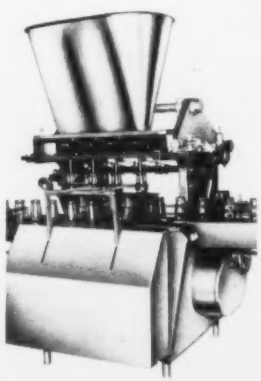

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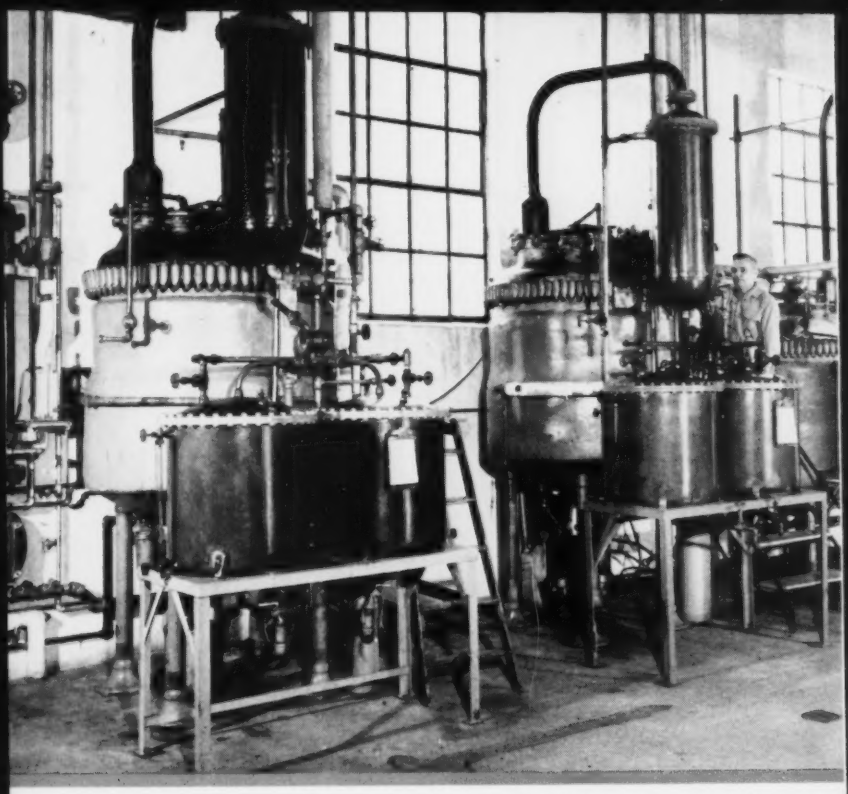

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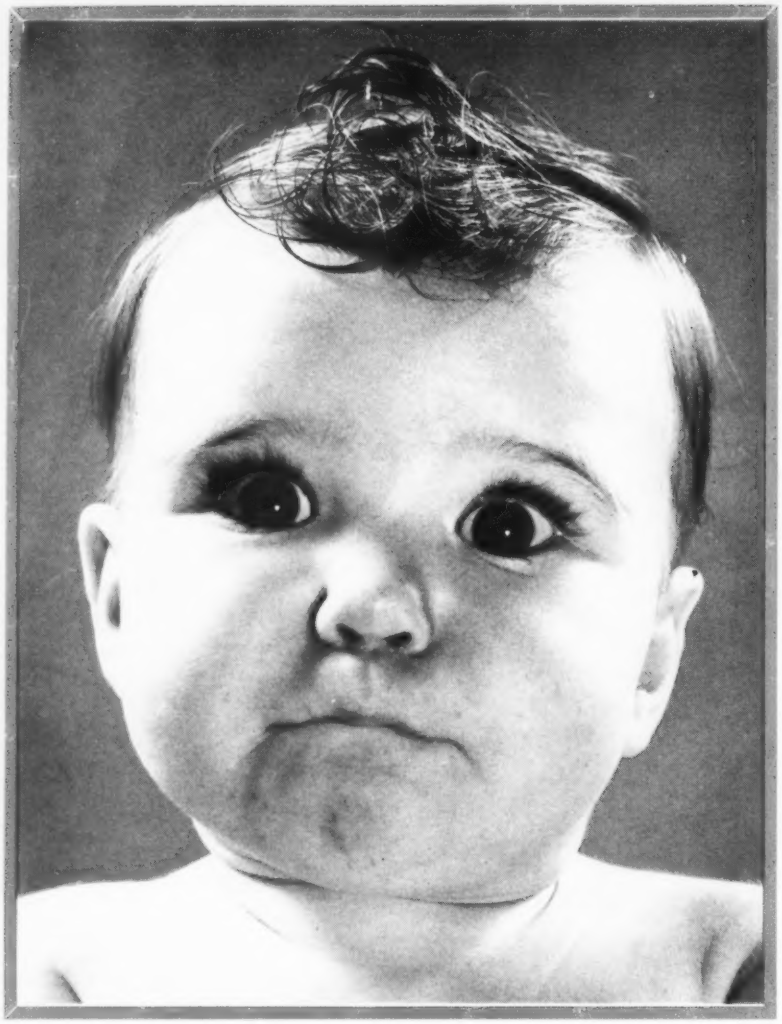

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News and Events

Fragrance Foundation to Hold 7th Annual Convention

The Fragrance Foundation, Inc., will hold its seventh annual convention on September 20, at the Savoy Plaza Hotel, New York City. In addition to members of that organization, all those connected with the fragrance industry are invited to attend.

This year's convention program promises to be of vital interest to all those in the fragrance industry, including retailers. It will include a progress report of the results of the television advertising campaign being conducted in three test cities —Columbus, Ohio; Denver, Colo. and Richmond, Va.—plus a talk to be given by Roger Pryor, vice president in charge of radio and television for Foote, Cone & Belding. Fragrance manufacturers as well as prominent executives of several major stores in the test markets will discuss the effect of the campaign on their fragrance business.

The business meeting, open to members only, will be held from 10:00 to 10:30 A.M. in the Crystal Room, and will be followed by an open meeting. After a cocktail reception, luncheon will be served.

Reservations may be made through The Fragrance Foundation offices, 1 East 53rd St., New York 22, N. Y. Luncheon tickets will be $10 each. There is no registration fee.

Hold International Perfume Symposium in Paris

The Second International Symposium on Synthetic and Natural Perfumes and Cosmetology is to be held in Paris, France from November 22 to December 3.

Symposium on Cosmetics Scheduled at ACS Meeting

The Division of Marketing and Economics of The American Chemical Society will hold a symposium on cosmetics on September 20 during the meeting of the ACS in Atlantic City, N. J. The symposium will be held under the co-chairmanship of Pierre Bouillette, technical sales advisor of Givaudan-Delawanna, Inc. and Jean R. L. Martin of Martin-Valer Consultants.

Seven papers will be presented after opening remarks by the co-chairmen. Subjects of the papers and the speakers will follow:

Marketing Chemical Specialties to the Cosmetic Industry—R. E. Horsey, Givaudan-Delawanna, Inc.; R. E. Vicklund, Sindar Corp.

The Development, Evaluation and Marketing of Shampoos—Dr. Donald H. Powers, Warner-Lambert Pharmaceutical Co., Ltd.

Federal Trade Commission's Trade Practice Rules for the Cosmetic and Toilet Preparations Industry—Paul M. Cameron, Federal Trade Commission.

Aromatics with an "A" as in Atom—Jack Mohr, Lentheric Div., Olin Mathieson Chemical Corp.

Cosmetics and Toiletries for Men—Dr. Oliver L. Marton, Shulton, Inc.

We Have Something in Common—Norman C. Chadwick, Avon Products, Inc.

Merchandising of Toilet Soaps—G. H. Dickey, Lever Brothers.

B. T. Babbitt Acquires Conn-Chem, Bostwick Labs

B. T. Babbitt, Inc. has entered into an agreement with Bostwick Laboratories and Connecticut Chemical Research Corp., whereby all outstanding stock of the latter two companies will be exchanged for stock in Babbitt.

Subject to the approval of Babbitt stockholders, the merger marks the entry of the 120-year old Babbitt company into the field of aerosol products, an area where sales have gone from less than 500,000 cans in 1947 to more than 250,000,000 units this year.

Babbitt will market the 16 Bostwick aerosol products, including Hep insecticide and Hep oven cleaner.

Connecticut Chemical Research Corp. will operate as a separate unit of B. T. Babbitt, under the direction of A. O. Samuels, who continues as president. Conn-Chem does not market any products of its own, but provides research, chemical formulation, design and development for American marketers.

While there are no final plans at present, it was indicated that Babbitt expects to put water-base cleaning items into aerosol cans.

Prentiss Drug and Chemical Has Moved Its Main Office

Prentiss Drug & Chemical Co., Inc. has moved its main offices to 101 West St., New York 1, N.Y. The new telephone number is PEnnsylvania 6-6766.

WINNERS OF HOUBIGANT COMPETITION RECEIVE TRIP TO FRANCE

At a recent meeting in Salt Lake City, Utah, the National Council of State Garden Clubs announced the winners of Houbigant's Quelques Fleurs French Garden Planning Competition.

The Eastern winner was Miss Elise Ludlam Bowles of Yonkers, N. Y.; Western winner, Mrs. F. A. Garrecht of Palo Alto, Calif. Thirty-nine state winners were also cited.

The prize for the two finalists was a trip to France to tour the great French gardens as the guest of Houbigant, and each state winner received a Houbigant Quelques Fleurs French Garden Merit Scroll in honor of her achievement.

Winners were given a bon voyage party at Idlewild Airport at which Pierre Harang, vice president and a director of Houbigant, acted as host. Above the awardees are seen as they received scrolls from Mr. Harang before boarding their Europe bound plane.

This contest was designed to attract and reward the best plans for laying out, planting and bringing to full flower an Americanized French garden of annuals which can be grown in 40 square feet of space or less by anyone in any part of the United States.

George L. Schultz (left), president of Shulton, Inc., and Frank N. Carpenter (right), vice president, were photographed with Victor Borge following the presentation of his one-man show, "Comedy in Music," which was sponsored by Shulton on June 14 over CBS television.

TGMA of Canada Panel Discusses Merchandising

A feature of the 28th Annual Convention of the Toilet Goods Manufacturers Assn., held at Whiteface Inn, Lake Placid, June 18th to 20th, was the panel discussion "The Forward Look in Merchandising." Chairman was Fred R. McBrien, president, The Bristol-Myers Co. of Canada Limited, and panel members were as follows: independent retailer, Bruce Lattimer, proprietor, Lattimer's Drug Store, Belleville, Ont.; chain drug store, René Leduc, vice-president, Leduc & Leduc, Montreal; wholesaler, Gordon A. Slemin, vice-president, National Drug & Chemical Co. Ltd., Montreal; and department stores, Charles Peacock, manager, cosmetic and drug department, The Robert Simpson Co. Ltd., Toronto.

Mr. Lattimer spoke on three aspects of merchandising—advertising, display and education. On advertising, he recommended radio and newspapers as the most potent forms from the small retailer's standpoint. Newspaper advertising has the biggest coverage, having a complete circulation in city homes, and is a good staple medium for promoting a product to create new users and to retail old buyers. Radio advertising is the greatest mass circulation medium covering the entire market. Television advertising is the most potent, he felt, but the relatively small budget of the retail business prevented its utilization. Direct mail, magazine, sampling, coupons, and stuffers as advertising have their effect but the cost is usually out of proportion to the results for the retailer, and are more suited for the manufacturer.

In his discussion of display Mr. Lattimer emphasized its importance, and recommended window display of a product, with a facsmile for the wrapping counter. He also commended a trend today to show allied products in one display unit. He likes self selection, but cannot see its use for cosmetics or photographic items.

Mr. Lattimer urged manufacturers to supply adequate information with their products so that the sales clerk can know the items he sells. As part of this information program, the salesman can function as a key supplier.

As an added point, he suggested that the manufacturer promote good disposition toward his products on the part of the retailer, who is often consulted by the consumer on his opinion as to relative merits of competing brands.

René Leduc, the chain drug store representative, asked for better displays —window, interior, and package—and for help in setting them up. He wanted sales help in training clerks, giving them knowledge of the merchandise, and supplying them with pamphlets and samples. The manufacturer should also check to see that an adequate stock is kept on hand by the stores. New merchandise should be in a store 30 days in advance of advertising, and the clerks made conversant with its qualities.

Gordon A. Slemin suggested that the smooth flow of goods from manufacturer to consumer was possible because of the competent wholesaler.

Charles Peacock, from the department store area of wholesale buying, stressed the importance of gaining the attention of the potential customer. He thinks the vending type machine is of great potential importance, and urged the manufacturer to ask himself the following questions:

1. Is my merchandise packaged to fit into these various new forms of vending?
2. Is my product name of such a character that it can be easily pronounced and read at a distance of three feet? Is it a memorable name?
3. Is my labeling fitted to the product so that the product name can be seen when on display in these new units?
4. Is my pricing right so that the customer will have the best chance of having the correct change for these various new forms of vending?
5. Is my product package sufficiently rugged so that it can stand up under the strenuous handling of tomorrow's methods of vending?

Innovation is the key success in tomorrow's market, Mr. Peacock feels. The product with enough novel and needed features usually fares best in jockying for position on the counter. He suggested that condensing, scaling down or specializing is a sane approach to tomorrow's marketing problems. In most department stores, space for lines is based on two factors, dollars per linear foot of counter space and also the percentage of volume of that line to the total of national volume. This, if studied, could give a vendor more products for an allotted space.

Mr. Peacock also urges that the manufacturer let the consumer know quickly and accurately how much a product will cost. He says that department stores don't mind deals from manufacturers, provided that: the retailer retains the normal mark-up; that the "on sale" date is the day an item comes into stock; that the advertised date is co-ordinated in any locality; that a set closing date is made firm and rigid with return privileges.

Mr. Peacock says that the department store can do a superior job for a cosmetic in the matter of promotion, display and advertising. But the product must have several factors: Timing—department stores promote swim suits in February, fur coats in August, and the item should tie in with these promotion dates; Naming—too few vendors give enough thought to the naming of a product as it relates to promotability; Color and or fragrance—this, of course, must be a la mode and the last word.

TV Viewers See Story of Aerosols

More than one and a half million television viewers in homes across the country saw the story of aerosols dramatized July 5 over NBC's "Home Show," one of the major day-time TV programs. Planned to tell the housewife and other viewers about the impact of aerosols in daily living, the program exhibited virtually every type of pressure-propelled product now on the market, and showed viewers how an aerosol is made.

Nancyann Graham, one of the show's stars and its food editor, reviewed the history of aerosols and discussed many of those most widely used in the home today.

John Frangos, an aerosol technical specialist of General Chemical Division, Allied Chemical & Dye Corp., explained how an aerosol works, and made a foam shave cream before the cameras by pressure filling.

A treasury of information

COSMETICS

THEIR PRINCIPLES AND PRACTICES

Ralph G. Harry

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This up-to-the-minute all-embracing book may be considered the "bible" of chemists who are engaged in the formulation and manufacture of cosmetic products and all practicing dermatologists.

No other book in this field gives such a combined wealth of medical and technical data on every phase of the subject. To mention but a few examples, it discusses the skin, its nutrition and scientific care; the hair, its proper grooming, the physico-chemical problems involved in its washing, and the potential hazards to the eye mucosa of the use of some detergents; the teeth and their care, covering the present status of antibiotic, antienzymic, ammonium-ion and chlorophyll dentifrices, and the luster-producing properties of toothpaste ingredients, etc.

Much of the information in the book has its source in the research activities of the well-known author, which date back for many years and embrace the fields of chemistry, dermatology and microbiology.

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"Received" Date in Publication Is No Longer Bar to Patent

The "received" date printed at the end of an article in a publication can no longer be employed by the U. S. Patent Office to bar a patent to an inventor, so in effect the Court of Customs and Patent Appeals has ruled. The court's holding amounts to reversing a long line of decisions of the Board of Appeals of the Patent Office.

The decision was handed down on June 21 in the case of In re Emil Schlittler et al. Dr. Schlittler is vice president and director of research of CIBA Pharmaceutical Products Inc., assignee of the patent application involved in the decision.

In its rejection of the Schlitter et al application, the Patent Office relied upon a single reference which was an article in the Journal of the American Chemical Society published in November, 1948. Dr. Schlitter and Dr. Andreia Uffer, a research associate, had filed an application in the Patent Office which was entitled to an effective filing date of May 21, 1948. At the end of the published article was the notation "Received April 30, 1948." The Patent Office's position, in line with previous decisions of the Board of Appeals, was that this notation at the end of the article constituted prima facie evidence that the invention was "known" by others prior to May 21, 1948, under a provision of the Patent Statutes.

The court, after reviewing numerous decisions, construing and interpreting the word "known," concluded that the placing of the article in the hands of the publisher did not constitute either prima facie or conclusive evidence of knowledge or use by others in this country of the invention disclosed in the article, within the meaning of the statute.

TONI ANNOUNCES EXECUTIVE APPOINTMENTS

Stuart K. Hensley

Samuel Bearmon

Stuart K. Hensley has been appointed executive vice-president of the Toni division of The Gillette Co. Presently serving as vice-president in charge of advertising and brand promotion, he will fill a new position as executive vice-president.

Three other appointments to major executive posts at Toni have been announced:

Martin N. Sandler, vice-president in charge of advertising and brand promotion, succeeding Mr. Hensley.

Samuel Bearmon, vice-president in charge of manufacturing, a new post.

Leonard S. Zieve, treasurer, succeeding Mr. Sandler.

Mr. Hensley rose through the ranks at Toni after starting in the sales organization. He joined the company in 1946 as a sales representative in Florida. He later became divisional manager, regional manager and general sales manager. Named vice-president in charge of sales in 1952, he also took on the advertising and brand promotion responsibilities six months later.

Mr. Sandler has served as a vice-president of Toni for the past eight years, and as treasurer since 1946.

Mr. Bearmon, who came to Toni nine years ago, has held the position of works manager, and earlier was director of purchases.

Mr. Zieve joined Toni in 1946 as cost accountant. He became assistant controller in 1948 and was named controller in 1951.

Strong Interest in Exchange Of Cosmetic Information

Robert A. Kramer, Secretary of the Society of Cosmetic Chemists, reports strong interest abroad in an international exchange of information on cosmetic science through an affiliation of professional societies. He recently returned from the Tenth International Cosmetic Congress in Brussels. An official representative of the S.C.C., he described to an audience of 500 delegates the achievements of cosmetic chemists in the United States. He was accompanied by Dr. R. H. Marriott, Past-President of the Great Britain Society of Cosmetic Chemists.

Robert A. Kramer

Cosmetic chemists from Denmark, France, Germany, and Switzerland conferred with Mr. Kramer, who reports that in each of these countries the cosmetic chemists are strongly interested in either starting a society, or in making an affiliation with that of the United States. The Danish society has offered to send English abstracts and translations of papers presented before their group.

Son of Charles V. Sparhawk Specializing in Electronics

Charles, the son of Charles V. Sparhawk, head of the company which bears his name, has written a paper on electronic engineering which has met with approval for its skilful exposition of the subject. Now taking a post graduate course leading to a Ph.D. degree at the University of California, he was graduated from Rutgers University and then served as a lieutenant in the air force, from which he was recently honorably discharged.

Dr. Jean Martinat on Flying Trip to Europe and Egypt

Dr. Jean Martinat left by airplane for an extended trip in Europe on August 8. He will visit Reggio Calabria, Messina, Florence, Venice and Lake Lugano. In Switzerland the tour includes Geneva, Lausanne and Fribourg, and in Germany he will make stops in Stuttgart, Frankfort, the Rhineland and the Black Forest. Then he will go to Grasse, France, and after that to the center of France where he was born. After a stay in Paris he will travel to Cairo, Egypt and then to London, from where he will return to New York about the middle of September. Just prior to leaving he returned from Bermuda where he organized Pitranga Co., Ltd.

FELTON CHEMICAL CO. HONORS RETIRING VICE PRESIDENT

Mr. and Mrs. Gampert at the table head; Dr. and Mrs. Joseph Felton in the foreground.

Louis Gampert, vice president and chairman of the board of directors of Felton Chemical Co. who retired recently, was honored by the executives and employees of the firm on his leave-taking. A cocktail party given by the company personnel was followed by a testimonial dinner at Luchow's restaurant, at which Dr. and Mrs. Felton and other company executives were joined by members of Felton's 25-Year Club. An international flavor was given to the gathering by the presence of two of Felton's foreign employees: Alec Lewis of the Canadian Branch, and Mlle. Jacqueline Lemoine of the French organization.

Mr. Gampert leaves Felton after twenty-three years with the company.

CSMA Proceedings Now Available

Proceedings of the 42nd annual meeting of the Chemical Specialties Manufacturers Assn., held in New York City last December, are now available in printed booklet form.

Copies are obtainable from the Chemical Specialties Manufacturers' Assn., 50 East 41st St., New York 17, N.Y. The price is $7.50 per copy, including postage, in the United States and Canada; $8 per copy elsewhere.

Proceedings of the group's 42nd mid-year meeting, which was held in Chicago last May, will be ready for distribution early in September.

NBBMA Directors to Hold Organizational Meeting

The Board of Directors of the National Beauty and Barber Manufacturers' Assn. will hold an organizational breakfast meeting on Wednesday morning, September 12, in the Empire Suite, Hotel Statler, New York City.

National Chemical Credit Assn. Announces Officers

The Eastern Division of the National Chemical Credit Assn., formerly the Drug, Cosmetic and Chemical Credit Men's Assn., has announced its officers and committee members for the year July 1956—June 1957. They are as follows:

W. J. Naber, Jr., chairman; E. B. Smith, vice chairman; J. P. Sommerville, treasurer; and C. I. Gincel, treasurer.

Joint executive committee: W. J. Naber, Jr.; E. B. Smith; J. L. Costello.

Nominating committee: W. W. Jenkins, chairman; O. D. Clayton; E. W. Kavanaugh.

Membership committee: O. C. Yeager, chairman; A. J. MacNiven; N. E. Byrne.

Interchange committee: H. E. Mix, chairman; J. F. Berg; T. E. Carpenter.

Arbitration committee: L. Sinnickson, chairman; J. P. Delardi; M. A. Talley.

Entertainment committee: W. E. Foster, chairman; C. J. Bauer; W. W. Tischler.

Constitution and by-laws committee: E. B. Smith, chairman; J. P. Sommerville.

Convention committee: W. J. Busch, chairman; members to be announced.

AMA Publishes Marketing Course Program Schedule

The American Management Assn. has released the schedule of its Marketing Course. Newest of the management educational association's continuing courses for business executives, the three-week course in the management of the marketing job will be repeated seven times during the 1956-57 fiscal year. Three course units are scheduled for July and August as part of the association's annual summer program on the campus of Colgate University at Hamilton, N. Y. The others will meet between September and June at A. M. A. headquarters in New York City.

The course embraces such related functions as product planning, marketing research, advertising, sales promotion, and sales training. It is planned to give the marketing executive a clear understanding of how these functions can be integrated, coordinated, and directed.

TRADE LITERATURE

The Risdon GB Valve for use on aerosol bottles is described in a brochure by the Risdon Manufacturing Co. Design advantages claimed for the valve are no metal in contact with contents, no spring, no danger of corrosion of valve components, instant on-off action, finger-tip operation, and an obvious spray direction. The valves are offered with standard or "micro-mist" actuators.

Frangrances for Polyethylene Packaged Cosmetics is the title of a bulletin issued by Dodge & Olcott, Inc. Third in a current series prepared by the D&O perfume department, the folder describes the studies made of the permeation rate of the company's entire repertoire of perfume components and compositions. This work, resulting in the accumulation of data concerning raw material weight loss and container deformation has enabled D&O perfumers to develop fragrances to be offered to the cosmetic industry for use in polyethylene packaged cosmetics. A representative list of these fragrances is also given.

Unplasticized polyvinyl chloride pipe and fittings are described in a new product bulletin issued by the Alloy Tube division of the Carpenter Steel Co. The bulletin gives a general description of two types, along with their specific advantages. Applications are listed by industry and process. The full range of corrosion resistance is also defined. Tables give such technical data as physical properties, dimensions and weight, maximum working pressures, types and weights, burst pressures, and thermal expansion and contraction.

The Facilities Catalog of Fluid Chemical Co., Inc. is now available. Through the use of photographs the company describes how it processes each customer's product. Among the facilities of the company which are shown are filling machines, packaging machines, quality control research laboratories and others which illustrate how Fluid operates in the contract packaging and aerosol filling fields.

MONROE-DANFORD SUPPLIES PACKAGING SERVICES

Maxwell D. Smart

Donald M. Shaw

Monroe-Danford & Co., manufacturers' sales representatives, supplies packaging items to the cosmetic, drug, pharmaceutical and related industries, and also offers its services on a consulting basis re packaging and production problems. Organized on April 1 by Donald M. Shaw and Maxwell D. Smart, the company maintains offices at Lincoln Park, N.J. Monroe-Danford is the exclusive manufacturer's representative in the eastern states of Liquipack Corp., Alma, Mich., handling the envelope packaging of liquids for that concern. It is also the exclusive representative of Scott Plastics, of Hartford, Conn., in southern New Jersey, Maryland, Delaware, and Eastern Pennsylvania, for plastic closures.

Mr. Shaw was formerly connected with the Richford Corp. as treasurer and general manager. For the past ten years Mr. Smart has been plant manager and technical director for M. W. Parsons-Plymouth, Inc., manufacturers of cosmetic raw materials.

SCC of Great Britain Issues Annual Report

The Society of Cosmetic Chemists of Great Britain has issued its annual report for the year 1955-1956, with the activities of the organization detailed.

At the annual general meeting on May 25 a new constitution was approved, and the retiring officers were returned unopposed. The officers for 1956-1957 are: R. T. Dobson, president; J. Pickthall, vice president; F. Riley, secretary; and H. J. Lovell, treasurer. Members of the council are: H. W. Hibbot, H. Holmes, K. G. Johnson, A. W. Middleton, W. Mitchell, W. W. Myddleton.

The program for the coming year was also announced, as follows:

October 5, 1956, Histology of the Skin, G. H. Bourne.

November 2, Silicones in the Cosmetic Industry, T. W. Watson.

December 7, The Behavior of Proteins at Interfaces, J. H. Shulman.

January 4, 1957, Particle Size of Powders in Cosmetics, H. W. Hibbott.

January 18, dinner and dance.

February 1, "The Use of Polyvinylpyrrolidone in Cosmetics and Toilet Preparations, I. Greenfield.

March 1, Ion Exchange Resins, T. R. E. Kressman.

April 5, Cationic Surface Active Agents, P. A. Lincoln.

General regulations and details of examinations for the diploma of the Society for 1956 have also been issued.

Laserson Sudamericana Opened in Buenos Aires

The Establishments Leopold Laserson (Laserson et Sabetay), located near Paris, France, have opened a branch in Buenos Aires, Argentina, under the name Laserson Sudamericana. The address is Belgrano 427. The firm, directed by Dr. Enrique Eliano and Dr. Felix Emilio Paolantonia, handles raw materials and compositions for perfumes, cosmetics, pharmacy and food products.

Laserson Sudamericana also represents in Argentina the Establishments Filippo Sergi of Reggio Calabria, Italy.

Richford Corp. Opens New Executive Office and Plant

The Richford Corp. has announced the opening of a new executive office and plant at 3618 Oceanside Road, Long Island, New York. The telephone number is Rockville Centre 6-2366.

The company's present location at 404 Fourth Ave., New York City, is to be used exclusively as show rooms and sales office.

Canada Dry Hit by $18 Million Damage Suit

Cott Beverage Corp., New Haven, has filed a civil anti-trust suit in federal district court here against Canada Dry Ginger Ale and ten of its directors, charging they conspired to destroy Cott's position in the field of fruit and flavored soft drinks. Cott is asking treble damages in a $6,000,000 action—a total of $18,000,000.

Canada Dry is charged with maintaining prices on its ginger ale and club soda at relatively high levels while cutting prices on more-costly-to-make fruit and flavored beverages in a procedure calculated to drive Cott out of business. Cott also charges Canada Dry gave special discounts where Cott had gained a strong market, but did not do so in other markets.

As a result, the suit alleges, Cott was forced to sell its products at "the same uneconomic level" as Canada Dry and was forced to spend large sums for advertising to meet the situation.

The suit also contends that Canada Dry has been granting "excessive pouring allowances" to bars and restaurants to prevent other soft drink companies from entering the field. In effect, a "pouring allowance" is described as a discount to compensate for loss during the pouring of drinks.

It is also charged by Cott that Canada Dry wants to maintain its hold on the "mixed drink business" in dining places and to gain strength for its own line of alcoholic beverages.

Officials at Canada Dry declined to comment on the suit until their lawyers have had a chance to study it in detail.

Houbigant Sales Corp. Holds Annual Meeting

Houbigant Sales Corp. recently held its annual sales meeting at the Yardham, Westhampton, L. I. Executives and sales representatives from the United States and Canada, as well as executives of Ellington, Inc. and Roy S. Durstine, Inc., advertising agencies for Houbigant and the Cheramy division respectively, attended.

Pierre Harang, vice president and Bert Georgi, sales manager, directed the sessions devoted to merchandising and presented the new fall and Christmas lines.

Several new products were unveiled, including Chantilly hand lotion, spray mist and soap. The highlight of the Christmas line is Chantilly perfume in new sizes.

Owens-Illinois Glass has New Connecticut Sales Office

Establishment of a Connecticut sales office in Hartford for the Glass Container Division, Owens-Illinois Glass Co., has been announced. John H. Kessler is senior salesman in the new office, assisted by James D. Irwin.

The Hartford office will handle a general line of glass containers and closures for beverages, foods and drugs. It is located at 945 Asylum Avenue.

SPOTLIGHT News...

A bottled orange beverage is being market tested by Coca Cola Co. If successful the new drink will be the first departure from the standard drink offered by the company since it was started.

Marilyn Monroe's new bedtime garb is Yardley's English lavender she reported after her arrival in England on her honeymoon with Playwright Arthur Miller.

A new blue cream deodorant which is claimed to contain a new ingredient which permits it to cool the underarm and also "calm" the skin is being market tested by the Procter & Gamble Co. The product is called Secret, and comes in three sizes from 29¢ to 69¢.

Pillsbury Mills Inc. is market testing a new soft drink mix in Tampa and St. Petersburg, Florida. Five flavors are offered in 4-oz. bottles. The new liquid mix is sweetened with sucaryl. The mix is owned and produced by the Presto Beverage Co., New York. Pillsbury has an agreement to test market it. This is the first time that the flour manufacturing company has entered the beverage field.

TV Time Foods Co., Chicago, is market testing a new drink mix line packaged in foil containers.

A secondary offering of 47,500 shares of Revlon Inc. flopped and was withdrawn with 60% of the block still unsold. Reynolds & Co., the New York Stock Exchange house that was midwifing the deal, says "the market fell away from our offering price" because many traders erroneously believed the block originated with Revlon officials or underwriters who marketed the public offering eight months ago.

Dr. Leonard A. Scheele resigned as surgeon general of the Public Health Service, August 1 to become president of Warner-Chilcott Laboratories, the ethical drug division of Warner-Lambert Pharmaceutical Co.

The fifth annual sales clinic of the Salesmen's Assn. of the American Chemical Industry will be held in the Hotel Commodore, New York, October 15. The speaker will be Carter L. Burgess, assistant Secretary of Defense who will take as his topic "Defense Needs Technicians Too." Key problems such as planning of a sales day, the relation of sales to traffic, creative ideas for making a sale and personal development will be taken up at the clinic. Three panel sessions will be held in the afternoon covering supervision of salesmen, improvement of reseller-manufacturer relations and communications between sales and management.

If fair trade enforcement lags price cuts are O. K. according to a new Pennsylvania law. Failure of manufacturers to enforce fair trade prices among competitors is a complete defense for underselling by retailers. If no action is taken within five days when notice of underselling is served on the manufacturer the retailer who filed the complaint may cut prices below the fair trade level.

The National Bureau of Standards is to be relocated on a 550 acre site near Gaithersburg, Maryland.

A new customer service function has been inaugurated by Sunkist Growers Inc., Ontario, Calif. for the Exchange brands of orange and lemon oils. Roy W. Hagelin has been engaged as technical consultant and will work with Fritzsche Brothers Inc., Dodge & Olcott Inc. and Ungerer & Co. the firm's national distributors of essential citrus oils. Mr. Hagelin, who is well known in the industry for his years of association with General Foods Corp. Charles R. Phillips Div. and leading firms in the flavoring and essential oil field, will make his headquarters in the company's New York office.

Plans for an extra long four day holiday week end this Christmas have been made by over 50% of the companies in the drug and chemical field surveyed by the New York Board of Trade. Over 50% will close all day Monday before Christmas; 25% will close one-half day, and 13% will be open all day. Plans for New Year's indicate that 35% will definitely close on the Monday before; 19% will close for one-half day, and 33% will be open all day.

A jointly-owned new company to be known as the Cochran Continental Container Co. has been formed by the Continental Can Co. and the Cochran Foil Co. of Louisville, Ky., which made rigid aluminum foil containers. That part of the business is incorporated in the new company and will be operated as the Cochran Foil Division. Other products of the Cochran Foil Co. are not included. This is the fourth company to be merged with or closely affiliated with the Continental Can Co. in recent months.

Procter & Gamble Co. plans to launch a $70-million 25 year debenture issue in September to expand its soap line.

REPORT ON THE ESSENTIAL OILS MARKET

From our Grasse, France correspondent

THE COLDS of last February have caused damages which are not to be underestimated. Fortunately the supply of lavandin will be supplemented by the produce of new plantings and a production equal to that of 1955 is estimated. This is not true of lavender, of which the old plantings have not been replaced; a deficit of 20 per cent is figured. On the whole the aspect of the plantings is comforting. The vegetation and flowering are excellent, because of wet days during the month of July. It is hoped that August and September will be sufficiently warm and sunny to permit a maximum distillation.

There has been a serious slackening of the purchases of lavender, though its market price has remained firm since the high reached during May. A slight tendency toward decline in lavandin has been resisted because of a regular demand from buyers, who are experiencing some diffiulty in supplying themselves; the distillers are holding available lots in the hope of obtaining a better price.

In our opinion a change in the market one way or the other is not likely before the end of September, when the results of the distillation will be known and the new produce put on the market.

As for the other essential oils and floral products, information is not firm. The harvest of orange flower in the Grasse region and Spain has been practically nothing. It was a little better in Calabria, and that of Tunisia will satisfy in part the neroli needs at a price 50 per cent over that of 1955. Morocco has also produced some quantity, but the odor is very far from equalling that of Grasse.

The plantings of roses were not hurt by the colds of February, and the harvest has been amply sufficient to fill the needs of the factories of Grasse. The harvest of jasmin began in July, and cannot be estimated at present.

Amos Light to Address September SCC Meeting

The September 26 meeting of the New York Chapter of the Society of Cosmetic Chemists will be addressed by Amos Light, who will talk on "Peripheral Vascular and Absorptive Changes in the Aging Skin." In discussing the changes in the skin from birth to old age, Mr. Light will use slides to demonstrate work done in his laboratory on penetration and absorption through the skin. He will also outline probable lines of future research in the field of peripheral circulation.

Mr. Light is Research Pharmacologist, Wellcome Research Laboratories of Burroughs Wellcome, Inc. He received the 1954 CIBS award. Mr. Light is a graduate of DePauw University, and has a Master of Science degree from Syracuse University. He also did two years of post graduate work at Yale University.

Lucien Lelong's Sirocco Perfume Box Wins Award

Lucien Lelong was honored at the Sixth Annual Set-up Paper Box Competition when the company received first award in the transparent boxes category for its packaging of Sirocco perfume. The box is formed of a transparent acetate sleeve with the ends made by rigid boxes of gold and forest green. The perfume bottle, seen through the transparent box, is labeled in matching colors.

Dodge & Olcott Markets New Oil Petitgrain

Under the brand name "Corona de Oro," Dodge & Olcott, Inc., has placed on the market a new, high-test grade of Oil Petitgrain, South American. The oil, which is all high ester content, is produced by only one grower in Paraguay, and is said to be one of the finest on the market today.

Annual Report on DECHEMA Activities for 1955

The Deutsche Gesellschaft für Chemisches Apparatewesen has published its annual report on activities of the society for the year 1955. A copy is available free of charge as long as the supply lasts. The first section reports on the lectures and meetings during the year, and provides a picture of the many activities of the DECHEMA in the field of scientific literature. Other sections record results of the other various endeavors of the society.

Cosmetic Executives Help Plan Controllers Institute Meeting

Arthur L. Boschen, vice president and comptroller, Vick Chemical Co., is vice chairman of the executive committee in charge of arrangements and other details for the 25th Annual National Conference of the Controllers Institute of America. C. J. Kushell, Jr., vice president, Revlon Products, Inc., is chairman of the ladies hospitality committee. The meeting will be held September 30-October 3, in the Waldorf-Astoria, New York.

Topics to be discussed at the gathering will include stockholders relations; market research as a tool for management planning; executive development; fringe benefits, and the accountant's role in labor negotiations.

NBBMA to Host Dealers Of Beauty Supplies

The National Beauty & Barber Manufacturers' Assn. will play host to beauty supply dealers attending the National Beauty Trades Show at the 7th NBBMA Dealers Cocktail Party, in the Cafe Rouge, Hotel Statler, New York City, September 11, 5-7:00 p.m.

Ben F. Breslauer, chairman of NBBMA dealers entertainment committee, extends a cordial invitation to all beauty and barber supply dealers.

Drug Market Show Held in Denver

Drug, toiletries, cosmetics and gift buyers converged on Denver, Colo., during the period August 4-9 to attend the Drug Market Show sponsored by the Denver Chamber of Commerce. The show displayed the largest array of such merchandise exhibited between Chicago and the West Coast.

De-Listing of Two Coal-Tar Colors Under Consideration

The Food and Drug Administration is considering calling a hearing on a proposal to de-list from the list of certifiable colors FDC Yellow #3 and FDC Yellow #4. The Toilet Goods Assn. desires to protect the industry in its use of these colors if harmless as used in cosmetics, and requests members to supply information as to whether or not they use these colors.

CAIA of Michigan Schedules Ladies Day Golf Party

The Chemical and Allied Industries Assn. of Michigan has announced that the annual Ladies Day golf party will be held on August 28 at Plum Hollow Golf and Country Club, Lasher and Nine Mile Roads, Detroit. Entertainment will feature golf for both the ladies and men, bridge, swimming, dinner and dancing.

Obituary

Adolph M. Spiehler

Adolph M. Spiehler, 88, former perfume manufacturer of Rochester, N.Y., died July 12. The perfume business he headed was founded by his father. Mr. Spiehler studied the perfumer's art in southern France. At one time he served as president of the Manufacturing Perfumers Assn.

PERSONALITIES

B. T. Bush, Jr. has joined S. B. Penick & Co. as special sales representative for aromatic chemicals and essential oils. He

B. T. Bush, Jr.

was formerly with the aromatics division of the Dow Chemical Co. in Jersey City, N. J. and in Midland, Mich.

Bernard Polak of Polak's Frutal Works has returned from a month's trip to Europe which included visits in Paris and London. Most of his time was spent with the parent company in Amersfoort, Holland.

Walter B. Ellis, former western district manager for the Gardena Promat Divi-

Walter B. Ellis

sion of Poor & Co., has been appointed assistant to the general manager of the western division of Polak & Schwarz, Inc., Culver City, California.

Robert F. Elder has been elected president of Plax Corp., Hartford, Conn., manufacturers of plastic containers.

Frank J. Steele, Chief Pharmacist at The Greenwich Hospital, Greenwich, Conn., will be the instructor in Practical Cosmeticology, to be given at the evening session, beginning in September, at The J. M. Wright Technical School, Stamford, Conn. The school is operated by the Connecticut State Department of Education, Bureau of Vocational Education.

Nelson M. King has been appointed sales manager of Myrugia for the eastern half of the United States. He is well known in the field through his association of many years with Lentheric, Inc., as New York metropolitan salesman. The V. P. Import Corp. handles the distribution of Myrugia's Joya perfume and Maja soaps for the country east of the Mississippi River. The Lionel Sales Co. is in charge of all territory west of the Mississippi.

Miss Maria Palmira Da Luz Carvalho became the bride of Kurt Joseph Pfeiffer on the 12th of June in Geneva, Switzerland.

Gabriel B. Raphel has joined Polak's Frutal Works, Inc., Middletown, N.Y., as a member of its perfume laboratories. Mr. Raphel arrived in this country in the early part of 1956. He was born and educated in France where he studied at the University of Aix-Marseille. He is a descendant of a family of perfumers, his grandfather and father having been engaged in the manufacture of perfume materials in Vallauris near Grasse, France. Mr. Raphel has been connected with the perfume industry since 1941 and has acquired a wide experience in this field.

James Lamb has been added to the technical staff of Dodge & Olcott, Inc., as cosmetic chemist. Formerly with Warner-Hudnut, Mr. Lamb's work involves coordination with the company's perfume and aerosol laboratories on problems of individual product development for cosmetic manufacturers.

Michael Ressner, advertising and merchandising consultant, has been appointed executive vice president of Fashion-O-Rama, the exposition to be held at the New York Coliseum this fall.

Miss Rodeama Crane of Los Angeles, Calif. became the bride of Albert Abrams on July 29. Mr. Abrams' father, Jack Abrams, is treasurer and comptroller of Max Factor & Co.

Louis Bezard, president of de Laire, Inc., accompanied by his wife, flew back on July 10 from a six-week business and

Louis Bezard

vacation trip in Europe during which he conferred with the directors and staff of the parent company in Issy les Moulineaux.

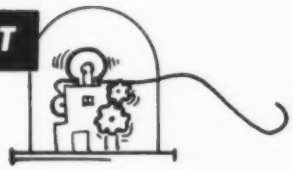
W. L. Vega has been appointed manager of the newly formed Special Products division of American Plastics Corp., a wholly owned subsidiary of Heyden Chemical Corp. Mr. Vega will operate from Heyden's New York City offices at 342 Madison Ave.

Harry Klingel has been appointed director of research of the Fine Chemicals

Harry Klingel

division of Shulton, Inc. He joined Shulton in 1955 when the company acquired A. Maschmeijer, Jr., Inc. He had served with the Maschmeijer organization as a chemist specializing in synthetic organic pharmaceuticals since 1943. Mr. Klingel is a member of the American Chemical Society and American Assn. for Advancement of Science.

MARKET REPORT



Outlook for Fall Trade Is Clouded . . .

MOUNTING costs, labor difficulties and various other inflationary factors all tend to cloud the outlook for fall trade in essential oils, aromatic chemicals and closely related items. Consumption of many finished products in which oils and chemicals are used would normally be expected to rise in the face of high incomes, but loss of wages through prolonged strikes, mounting taxes and other costs threaten to have an adverse influence upon sales of many processed items. The late rise in ethyl alcohol prices, while due in some measure to a broadening in consumption, also reflected higher labor and container costs.

PRICE CHANGES

Advances	Current	Previous
Carnauba wax, No. 1, yellow	$1.39	$1.30
Oil nutmeg	$7.50*	$5.00
Gum rosin, water white, drums, cwt.	$8.25	$8.20
Balsam, Tolu	$5.00	$4.35
Cocoa butter	0.49	0.47
Gum olibanum, siftings	0.18	0.12
Oil sage, Dalmatian	$4.35	$4.00
Oil cardamom	$38.00	$37.00
Oil lavender, spike	$1.90	$1.85
Declines		
Heliotropine	$3.00	$3.20
Terpin hydrate, dom. NF	0.70	0.84
Balsam, Peru	$1.20	$1.30
Gum turpentine, So. gal.	0.53¼	0.54
Copra, coast, ton	$148.00	$154.00
Palm oil, tanks	0.1345	0.1385

*Nominal
Prices per pound unless otherwise specified.

HELIOTROPINE AT NEW LOW—

Sliding raw material costs as well as a keener competitive situation among major producers were factors behind a further reduction in heliotropine prices. The article hit a new low with offerings being noted at $3 to $3.25 per pound.

GLYCERIN OUTLOOK CLOUDED—

A feeling of uncertainty has developed in glycerin regarding the trend of prices over the last half of this year. The release of data for the month of May by the Department of Commerce placed stocks at 65 million pounds as against an earlier report which placed April stocks at 56 million pounds. The latter figure was in error and failed to include accumulated increases. Stocks at the end of April should have been reported at 64 million pounds. Trade observers are hoping that stocks will start to decline as the result of usual vacation closings at soap plants over the past month but it pointed out that usage of glycerin normally falls off during the summer.

SPICE OILS STEADY TO FIRM—

Spice oils displayed a steady to firm tone. Both the West and East Indian varieties of nutmeg oil scored further advances as the result of mounting costs of the spice, and oil ginger, cardamom and caraway likewise displayed a marked degree of strength. After losing further ground in the early part of July, Dalmatian sage turned firmer for the first time in many months. The rise in oil nutmeg established prices at $7.50 to $8 per pound, and dealers pointed out that all prices were subject to confirmation prior to sale.

GUM OLIBANUM SCARCE—

Both olibanum tears and siftings continued in a tight supply position over the past month. Quotations on siftings were virtually nominal. Some trade observers stated that only fair average quality material could be had at the inside figure of 18 cents.

FORMOSAN MENTHOL—

Formosa could become a rather important source of natural menthol if recent estimates on crude peppermint oil production prove correct. Output of crude peppermint oil in Formosa from which menthol is made has been estimated at 300 metric tons this year, which could mean an output of menthol of around 150 metric tons. Meanwhile Japan is expected to have an exportable surplus of natural menthol of around 400,000 pounds this year, the largest quantity since World War II. First lots of this year's production in Japan should be ready for shipment by early September.

WAXES GENERALLY FIRM—

A little more buying interest developed in bleachable grades of beeswax over the past month due to reduced offerings from Brazil and Chile. Candelilla wax was in very limited supply here and for shipment out of Mexico. Prices were boosted by as much as 10 cents per pound in June, but the major factor in the market continues to be one of supply rather than price. The quantity of yellow carnauba wax from the last crop in Brazil was approximately 25 per cent under normal and it is feared the yellow grades will again be neglected next season. The trees, it is said, derive more strength when new leaves are left on the tree. It is the new leaves that yield the yellow grades of wax.

VANILLA OUTLOOK FIRM—

Crop news from Madagascar continued very bullish over the past month. On the basis of reports from that area vanilla bean prices are likely to remain firm and high through 1957. Picking of new crop green beans which normally starts in June was held up by excessive rains from six to eight weeks and the prices paid by curers for the green beans are reported at about the same level as the prices being paid for old crop beans. Weather in Mexico has been highly favorable for the growing crop but it is far too early to determine what the outcome will be. Green beans will not be ready for picking in Mexico, until November or December.

NEW LEMON OIL DEVELOPED—

A new Exchange Brand Californian lemon oil has been developed by Sunkist Growers, Inc., of Ontario, Calif. The new oil, USP., Blue Label No. 413 is being marketed through the firm's co-distributors, Ungerer & Co., Inc.; Fritzsche Bros. Inc.; and Dodge & Olcott, Inc. While the production of the new oil starts with the Regular Exchange Brand oil No. 410, it is said to contain slightly different characteristics which contribute to an excellent flavor. It is priced at $4.50 per pound in drums or original 35-pound containers with slightly higher prices applying for smaller quantities. Earlier in the year, Sunkist Growers, Inc., reduced its price for its regular grade lemon oil $1 per pound to the basis of $5.

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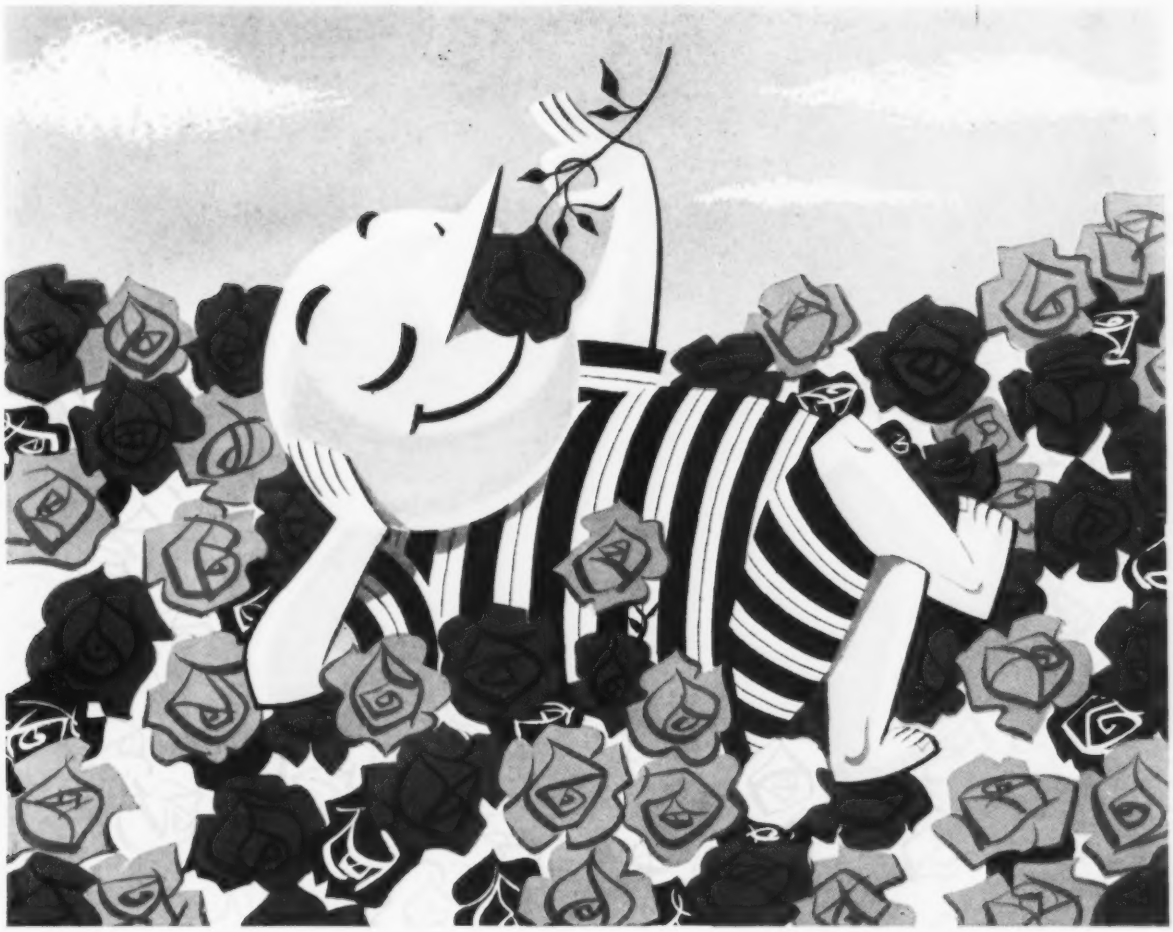

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